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ABSTRACT

This document contains 32 papers from a conference on balance and perspectives in comparative vocational education and training (VET) research in Europe. Selected papers are as follows: "On the Path to Vocational Training Research with a European Dimension" (Oliver Lubke, Klaus Schedler, Alphonse de Vadder); "The Val Duchesse Social Dialogue" (Synnova Aga, Manfred Tessaring); "VET Researchers and Research Institutions in Central and Eastern European Countries" (Mihaly Csako); "Instruments of Comparative Statistics for Areas of Interest of the European Union" (Bettina Knauth); "Trends of Convergence and Divergence in the Systems of Education and Vocational Education and Training of the Member States of the European Union" (Tom Leney, Marcella Deluca); "Historical and Cultural Approaches to Comparative VET-Research" (Anja Heikkinen); "Does Strategic Behavior Play a Part in the Demand for Education?" (Benedicte Gendron); "Comparisons of Post-16 Education Strategies to Promote Parity of Esteem between Vocational and General Education in Europe" (Johanna Lasonen, David Raffe); "Growing Skills in Europe" (Asa Murray, Hilary Steedman); "'Transitional Labor Markets' between the Vocational-Training System and the Employment System" (Klaus Schomann); "Training for Professionalism Development" (Benito Echeverria, Sofia Isus, Lander Sarasola); "Collaborative and Comparative Approaches to Researching VET (Graham Attwell, Jenny Hughes); "Additional Qualifications at the Interface between Initial and Continuing Education/Training, a

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Comparative Survey (AQUI)" (Georg Hanf); "The Integration of Older Workers into Teamwork" (Eva Kuda, Jurgen Strauss); "Integration in the World of Work and Occupational S[k]illing of Young People in the Education System" (Lander Sarasola Ituarte, Luis M. Naya Garmendia); "Comparative Vocational Education and Training Research of Value to Educational Policy--Quality Assurance in Terms of Conceptual Approach, Research Organization and Support Policies (Ingrid Drexel, Martine Moebus); "Management of Training Time in France and Denmark" (Eric Fries Guggenheim, Jacques Trautmann); "Vocational Training and Access to Trades and Professions" (Hildegard Schaeper, Jens Zinn); "Latin American and Caribbean Network for Information, Research and Management of Vocational Training" (Klaus Przyklenk); and "Towards Instituting a Standing European Network for Cooperation in Comparative Vocational Education and Training Research" (Uwe Lauterbach). Many papers include substantial bibliographies. Overviews of four current research projects on VET and a list of participants are appended. (MN)

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Comparative Vocational Education and Training Research in Europe: Balance and Perspectives

(Contributions, recommendations and follow-up of the Cedefop/DIPF Conference
from January 1998 at the Science Centre in Bonn)

Uwe Lauterbach and Burkart Sellin

Frankfurt am Main/Thessaloniki 2000

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Executive Summary

At the invitation of Cedefop, the European Centre for the Development of Vocational Training, and DIPF, the German Institute for International Educational Research, more than 100 researchers and vocational training experts from most EU Member States and other countries in Central and Eastern Europe attended the Bonn conference that was held in collaboration with the German Federal Ministry for Education, Science, Research and Technology and the European Training Foundation (ETF, Turin). The aim of the meeting was to examine how comparative vocational training research is related to policy and practice and how it contributes to the transfer of innovation in the European context. A further focus was to assess the current situation and highlight prospects for the development of comparative vocational training research in future.

The conference opened with introductions by the organizers and statements by the speakers from the Commission and representatives of the social partners. These were followed by a contribution by Eurostat on indicators and European Statistics Office findings in the area of education and vocational training statistics and a talk by a researcher from the University of Budapest on a preliminary study on trends in vocational training research in the countries of Central and Eastern Europe. After that the delegates joined one of four working groups to discuss methods, organization and contents on the basis of concrete examples from practice, research findings and the experience gained in comparative vocational training research. Their next step was to formulate researchers' interests and what they require of policy-makers and institutions promoting research. The latter was addressed to European bodies (Commission, Council and Parliament) and other institutions (Cedefop, the ETF and the organizations of the social partners) at European level as well as national organizations and ministries involved in counselling and research.

In his introductory talk, Cedefop's Pekka Kämäräinin described the trends in cooperation among researchers, which has been supported in recent years by the Centre. He referred to the European initiatives and programmes to promote comparative vocational training research and studies (Leonardo da Vinci and the 4th Framework Programme of Research). Although there is still a certain danger of vocational training research being marginalized compared to other academic disciplines, the recent establishment of important European networks and the above-mentioned programmes have reduced this threat. Comparative vocational training research was important as a vehicle of knowledge transfer and a mediator in transferring knowledge and experience through intercultural comparison and transnational cooperation in policy-making and practice of participating Member States and other countries.

Wolfgang Mitter presented a detailed DIPF analysis of the historical and scientific development of education and vocational training research, focusing on comparative studies. He summed up past accomplishments and outlined various current approaches. He portrayed comparative vocational training research in relation to the evolution of comparative education research, which has long been established as a separate discipline, but he also underscored the importance of other related fields: social science, political science, economics, etc. Mitter described comparative vocational training research as interdisciplinary and multidisciplinary and pointed out that systematic analysis of the approaches has not yet been conducted. Acceptance of this plurality of approaches and interdisciplinary cooperation was a prerequisite for effective vocational training research, especially comparative vocational training research, although single-discipline efforts will still be required to provide indepth study of certain aspects. The "nation" or separate State is less and less the alpha and omega of research effort, which is more and more permeated by international and European aspects, "transcending borders" in the literal sense. Observations and analyses with an intercultural, interregional and sectorial focus or examining specific social or ethnic target groups were increasingly eclipsing system analyses. They were seen as providing more insight than pure juxtapositions. Mitter emphasized the importance of precise prior definition of the *tertium comparationis*, which allows subsequent description and analysis of the highlighted objects/phenomena and study of their comparable and contrasting elements.

Three aspects have been selected to facilitate summary of the most important results of the conference:

- position and definition of comparative vocational education and training research in European policy-making, research and practice;
- EU programmes and initiatives in the areas of comparative vocational education and training research; and
- requirements and opportunities for networking comparative vocational education and training research at European level.

1. Position and definition of comparative vocational education and training research in European policy-making, research and practice

Interdisciplinary and multidisciplinary approaches are the distinctive features of comparative vocational education and training research projects. Their complexity is the result of the wide variety of occupations and jobs at all levels of education and training, including continuing training, which exists in the education systems of each individual country and which is multiplied further in European and international perspective. Comparative research highlights both parallels and contrasts. Differences should not be ironed out but should be clarified in order to describe the common dynamics of the systems. This will improve learning from each other, support policy and practice of vocational training at all levels of decision -making and help to increase the expertise of parties to the social and political dialogue. Comparative education research and comparative vocational education and training research are located at the interface between vocational training policy and practice. Their relation to policy and practice must, however, be brought to light. Nevertheless, basic research continues to be a necessary step in promoting an understanding of what we are doing and trying to do in a broader context of history, philosophy and society. As a rule, however, vocational education and training research is aimed at direct or at least indirect application in policy and practice.

Comparative vocational education and training research exposes inadequacies in one's own country and facilitates rapid identification of new solutions since one has to loosen the bonds to familiar institutional and cultural conventions. Education and training research and comparative education and vocational training research are relatively young disciplines, but they are constantly gaining in importance with the increased weight of lifelong learning, i.e. job-related and occupational training.

However, simultaneously, international and system comparisons seem to be losing ground to qualitative and empirical comparisons of certain constituent aspects and problems. Intercultural aspects, regional and sectorial studies, certain target-group problems and possibilities and limits of specific government intervention policies come to the fore, while Europe-wide comparisons and transnational investigations are being relegated to the back burner in times of growing cooperation and increasing exchange of information and experience. Even pan-European comparisons, which are based on data which has been collected and analyzed in the individual Member States, although processed and checked by Eurostat and EU institutions, seldom provide sufficiently telling images. They still require supplementary qualitative interpretations and more detailed study. The extra effort should be devoted to a limited number of typical Member States or European regions permitting indepth analysis of selected aspects. Intercultural and transnational comparisons must evolve into middle and long-term cooperation projects if they are to furnish a solid basis for the transfer of knowledge and experience.

System diversity and uniformity are at odds with each other in Europe. The idea is to exploit diversity and minimize its disadvantages, which requires a simultaneous dose of transparency. This can only be accomplished by credible, professional comparative vocational education and training research in support of European economic and social coherence pursuant to existing treaties. Comparative vocational education and training research will assume a special role through EU enlargement and international cooperation with other countries and regions. The objective is to prepare new partners to enter into closer specialized and technical cooperation, to adapt their systems more rapidly to new challenges, and to engage in competition. Exchange and cooperation with other regions of the world and advanced countries and associations of countries should be promoted through vocational education and training research.

2. *EU programmes and initiatives in the areas of comparative vocational education and training research*

Speakers unanimously applauded the commitment of the EU (European Commission, Cedefop and the ETF) in promoting vocational education and training research, particularly comparative research. The conference also hailed the willingness of the participating institutions and departments to coordinate their efforts, which some of those in attendance felt did not work particularly satisfactorily. Some delegates, particularly the users of research findings, urged that future EU programmes should not only feature special promotion of vocational education and training research and comparative surveys and analyses, but also increased funding of these projects. The ETUC spokesman demanded a heavier flow of financial support for this avenue and a scope similar to that of the pilot projects in the future EU vocational training programme currently under discussion, the successor to Leonardo da Vinci. These demands elicited no objections from UNICE employer representatives or any other participants. Speakers also expressed the wish that the 5th Framework Programme of Research give a higher priority than its predecessors to basic research in general and in particular to general education and vocational training research. If this proves impossible, basic research should be included in the upcoming EU Education and Vocational Training Programmes.

In a number of Member States and particularly in the Central and Eastern European countries, very special support for research in these fields was needed. Outside assistance could provide them with strong stimuli for reforming their systems, possibly modelling them on those of more advanced countries. The conference concluded that the intervention of EU structural funds, particularly the Regional and Structural Fund and the European Social Fund, could support the institutional and individual promotion of vocational training research and European cooperation much more than in the past. Agenda 2000, i.e. Commission proposals focusing on EU enlargement, should also be interpreted or expanded to this effect.

Cross-border co-operation was described as a rocky road, both because of the intercultural and interinstitutional complexity and due to time sovereignty and the prevailing lack of continuity. Avenues of cooperation, paved with tedious effort, often cannot be continued or consolidated or can only be kept open with difficulty because of problems stemming from programme expiration and rapidly changing priorities. Terminological problems, communication problems and problems arising from varying research theories and approaches in the countries involved are still common, but considerable progress has been made in these areas. Administration of EU programmes involving EU cooperation with Member States and individual project organizers was criticized as too time-consuming and complicated. The cost-benefit ratio is often unfavourable. Some researchers are deterred from submitting applications because they fear the complicated reporting procedures rob them of the time to do the actual research.

Organisation of research cooperation often faces barriers in finding suitable topics for investigation of separate aspects as well as in finding appropriate research partners. Deadlines for the submission of bids to the EU were said to be so short in most cases that even the necessary prior reflection and establishment of contact are impossible, much less any detailed coordination of objectives and discussion on the functions of all those involved. This leads to the creation of a quasi virtual reality which threatens to drift further and further from actual research practice in a transnational and European context. Speakers saw the need for a Cooperation Exchange and an early warning system with detailed information on new invitations to tender and programmes of the many different EU bodies. Voluntary panels of experts and not primarily commercial consulting offices should handle preselection and evaluate applications prior to the decisions of the responsible committees.

The huge administrative overhead has not led to a commensurate increase in efficiency in terms of professional quality and the qualifications of the accepted applicants. Unprofessional consulting firms would often tap and embellish professional research findings to hard sell their pseudo-efficient "results", usually displayed in dazzling graphics. It was also admitted, however, that researchers often share the blame because they still lack the skills to sell and disseminate their findings. In many cases the findings need to be refined and presented in a form that is easier to understand and that demonstrates practical application. Another failure addressed at the conference was that interim and final reports, project outcomes and presentations frequently omit or superficially treat methodological and organizational problems and how they are overcome in designing and conducting research and implementing findings. Better reporting of these aspects would provide important lessons for future projects and their managers, who are currently forced to reinvent the wheel each time. Central coordination, while provided for, is rarely effective and usually does not work, creating another major stumbling block.

One selection criterion for research projects, frequently a dominant determinant, is the number of participating Member States or applicant states. This criterion was deemed less and less appropriate because some subjects were better illustrated in a smaller circle of countries and because it often hindered desired indepth, ongoing cooperation. Longer-term cooperation of this nature would foster the preparation and execution of second and third-generation projects and also wider publication of the findings of the earlier generation research projects.

3. Requirements and opportunities for networking comparative vocational education and training research at European level

The working groups reported on a number of interests and requirements for researcher networking. Their findings will be documented in detail and summarized separately by the conference organizers. A DIPF expert report for Cedefop, surveying possible goals and tasks as well as tools for establishing a European network, was outlined during the plenary session on the last day of the conference. Speakers from the Latin American Vocational Training Centre (CINTERFOR), Montevideo, and the Fraunhofer-Institut, Erlangen, Germany, presented their approaches and experience in using new information and communication technology for international and European networking in the area of vocational training and youth exchange. Michael Kuhn, from the University of Bremen, Department of Education and Technology, related his thoughts about the Forum Network-initiated collection, processing and dissemination of approaches and findings in vocational education and training research in Europe.

This project is sponsored by the Commission (DG XII) within the 4th Framework Programme of Research.

The conclusions of the working group discussions and the brief plenary debate clearly showed a need for closer cooperation as well as the necessity of closer consultation on goals and functions, task coordination, policy and practice applications in a network of persons involved in comparative vocational education and training research. The role and function of the sponsors of such a network and their links to other networks and contexts, both at European and national levels, must be considered more thoroughly and then defined. Cedefop needed to pause after the conference to redefine its own capabilities and limits in connection with the appropriate Commission departments and the ETF. The Commission (DG XII) speaker emphasized the necessity to concentrate on priority fields. He specified questions of the (re)integration of the long-term unemployed and less qualified, the issue of access to initial and continuing vocational training and combating the marginalization of certain target groups. The Turin foundation emphasized that promotion of vocational training system reform in Central and Eastern European partner countries and former Soviet republics is impossible without the involvement of vocational education and training research. The ETF argued strongly for the inclusion of the associated countries of Central and Eastern Europe in the planned comparative vocational education and training research network.

The representatives if the social partners on the Management Board stressed their fundamental willingness to attach even more importance to this sphere of Cedefop work. They are waiting for related proposals from Cedefop's directorate.

Burkart Sellin, the project coordinator, emphasized that Cedefop cannot provide comprehensive research support but it can provide a permanent platform - a contact point and Information Exchange - and help expedite publication of projects and research findings and accelerate the translation of political and practical goals of European vocational training policy into new projects and research activities. Like the researchers themselves, Cedefop operates at the interface of policy and practice and attempts to support both sides with information, advice, services and its own studies. Sellin stated that the new information and communication technologies can speed up this process, make it more effective and create many new possibilities. However, he cautioned that new technology cannot fully replace personal, trust-building contact, concrete local cooperation or such major conferences as this one. Cedefop intends to upgrade its presence as a crossroad of vocational education and training research in an enlarged Europe and it is prepared to cooperate with vocational education and training researchers in general and with those involved in comparative studies in particular.

The conference proceedings, papers, presentations and findings will be documented in a Cedefop publication for distribution. The organizers thanked the researchers and speakers of all participating institutions for their commitment and expressed the hope that at least some of the expectations the conference engendered and some of the wishes and demands voiced at the meeting will be met. The organizers promised to do everything in their power to make this happen. They plan to begin soon with a test phase for a network to supplement existing networks.

Further information can be obtained from Burkart Sellin or Pekka Kämäräinen, Cedefop, from Uwe Lauterbach or Philip Grollmann, DIPF.

Introduction

Uwe Lauterbach and Burkart Sellin

Point of departure

The economies of industrialised countries are undergoing a fundamental structural transformation from being production-based to being service-based. Indispensable occupational qualifications now increasingly include the capacity for abstract thinking, adaptability and creativity, together with an aptitude and willingness to engage in lifelong learning. The degree to which Europe's VET systems are prepared for these challenges varies considerably. The enormous importance of vocational education for the economic and social development of industrialised countries and for European cohesion within the framework of the European Union, the EEA and associated States is indisputable and is likely to gain more significance as common employment and social policies emerge. Articles 126 and 127 of the European Union Treaty, which deal with education and training, emphasise these interrelationships, as does the chapter of the Amsterdam Treaty dealing with employment. It is no longer only experts in the field who take the view that purely national solutions to economic and social problems are no longer feasible.

The *study group on education and training* set up by the European Commission holds much the same views. Its report picks up the keynote ideas of the White Paper on 'Teaching and Learning: towards a learning society', consolidates them and makes recommendations which highlight the great significance of the *development of general and vocational education and training* for the realisation of a European identity, the preparation for the emergent learning society and for Europe's economic efficiency. This report repeatedly points out the significance of comparative VET research for the further development of education and VET systems.[1]

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[1] European Commission (1997): *Accomplishing Europe through education and training*, report of the study group on education and training, Brussels/Luxembourg (also available in French and German).

In the first *European Report on VET Research and Development*, which Cedefop published in 1998, an attempt is made to take stock of the situation on the basis of available studies. A conference on the state of work on this report, which took place in Thessaloniki in July 1997 with the participation of the authors, and a conference of experts in November 1997 held in conjunction with a meeting of the Cedefop Management Board, once again demonstrated the necessity of reviewing the methods and perspectives of comparative VET research. Within the framework of European VET policies and also the increasingly important social dialogue between trade unions and employers' organisations, numerous subjects are dealt with at the European level which need support from comparative VET research studies. Cedefop hopes that this conference, organised jointly with the German Institute for International Educational Research (DIPF) and the cooperating partners, will provide indications as to how it can more accurately define and further develop its role in supporting researchers, institutes and institutions for the promotion of research in the Member States and in Europe more generally, with regard both to method and organisation as well as content and subject-matter. It would like to do this in accordance with the policy priorities of the EU and associated States, while taking account of the needs of the social partner organisations in support of social dialogue.

Objectives of the event

The conference *Comparative VET Research in Europe – Approaches, Policy Options, Innovation Transfer* attempted to take stock of international *comparative VET research* in terms of both method and organisation and also with reference to important themes of European VET policies, and to draw up scenarios for their development by researchers/institutes/research institutions involved in this field and by the institutions and players involved in the political discussion (EU institutions, social partners, national partners). It focused on questions of transfer at the interface between the requirements and results of practical policies, on the one hand, and relevant research results and methodological concepts of comparative VET research, on the other. The objective was to contribute to the innovation of the systems and to European cohesion.

During the conference the essential approaches were presented and discussed with reference to the relevant basic discipline, e.g. comparative education, comparative sociology, etc. The results were discussed and developed further in workshops and the link with practice established through the presentation of individual VET research and study projects which covered several countries and had interesting methodological approaches. National and international research institutions, international organisations, supranational authorities and representatives of social partner organisations were also invited to present their ideas.

Cedefop was the main organiser and funder of the conference. Cedefop and the German Institute for Educational Research cooperated in preparing, organising and evaluating the conference. The conference was also supported by the German Federal Ministry of Education, Science, Research and Technology (BMBF, Bonn) and the European Training Foundation (ETF, Turin).

Thus the objectives of the conference were:

a) to highlight the prospects for the further qualitative and quantitative development of comparative VET research in Europe;

b) to promote closer and better cooperation among the relevant researchers and research institutions in order to improve the quality and efficiency of comparative studies and their relevance to politics, science and practice;

c) to establish relevance and a reference point for policies (policy options) through practical examples and case studies which allow comparison of several countries, and to assess the contribution of comparative VET research to VET policies in Europe, e.g. to the issues related to lifelong learning and continuing vocational training and their development, to the qualification of those employed in the VET field, to the development of curricula, taking into account the challenges posed by the information society, etc. and to improving opportunities for promoting innovation transfer through comparative VET research;

d) also, to examine how to encourage and develop closer networking of those VET researchers, their institutes and the relevant institutions in Europe who have a long-term interest in comparative research in order to implement the specified goals still in need of more precise definition.

At the time, EU programmes in the field of education and training, particularly Socrates and Leonardo da Vinci, were preparing to enter their second phase. Care was to be taken to ensure that they contribute substantially to guaranteeing that future comparative VET research is promoted and utilised in a way that its importance deserves. The Fifth EU Research Framework Programme was also in preparation, and again, education and training research was likely to play an important part in it. For these reasons it was an apt time to hold a conference of this kind.

About 80 delegates from all over Europe (see List of Participants in the Annex) took part. About half of these came by special invitation and the cost of their travel and accommodation was paid for them. The other participants attended the conference and associated events free of charge. Even they were invited by the organisers on request in specific cases.

This reader primarily documents the contributions to the conference and its course, but further contributions prepared after the conference have been included in order to develop the conference theme. This applies in particular to the contributions by Grollmann/Sellin at the beginning and that by Lauterbach at the end of this publication.

The editors would be very pleased to receive comments and feedback from readers. These can be made via the research platform on Cedefop's homepage (www.etv.eu.int) or the electronic platform of DIPF. A European culture of education and training research is still in its infancy. There is still much to be done to advance cooperation between researchers across all frontiers for the benefit of VET in the Member States, in the European Union and in the rest of Europe, as an important element of balanced economic and social development.

Welcoming and introductory addresses

1 Methods and Perspectives for Comparative Vocational Education and Training Research in Europe

Johan van Rens, Ulrich Haase, Hans Konrad Koch, Wolfgang Mitter and Erhard Schulte

Johan van Rens [2]

Above all, I should like to thank our host country, and particularly the BMBF, for their efforts in organising this event.

CEDEFOP has been greatly helped by the former in planning and arranging this conference.

The BMBF was instrumental in establishing contacts with CEDEFOP's cooperation partner, the DIPF, in Frankfurt, without which this event would not have taken place, and particularly not in this form or in this location.

I should also like to take the opportunity of giving my special thanks to Dr Haase, CEDEFOP's Management Board Member from the Federal Republic of Germany, for his many years of support for the European Centre for the Development of Vocational Training, right from the time we were established in Berlin to our new seat in Thessaloniki today.

We are very pleased with the impact this conference has made in research circles throughout Europe, and thank the preparatory group for its support.

Well over 200 applicants, top-ranking experts and researchers from almost all the European countries have put forward proposals for projects and expressed their wish to bring in their experience following the call for papers issued by CEDEFOP and the DIPF.

The Turin European Training Foundation also expressed its interest in collaborating in the event, particularly in order to give researchers from Middle and Eastern Europe

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[2] Director of CEDEFOP

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the opportunity to make their own personal contributions, and CEDEFOP is also very pleased about that.

As Director of CEDEFOP, I should like to thank my colleagues, and in particular Burkart Sellin and Pekka Kämäräinen, for their work.

Vocational education and training research, and in particular comparative vocational education and training research, has until now had great difficulty in developing its image.

This kind of research is still very new and is often grouped under other subjects such as education and training research, social and economic research.

Vocational education and training is characterised by both a multidisciplinary and interdisciplinary approach and research design.

The challenges of economic and social developments, and particularly the situation on the labour market, have focused attention on vocational education and training in the last few years.

The internationalisation of the economy, the European single market and increasing competition all present new challenges.

Demographic trends in Europe and the corresponding shift in the age pyramid are leading to less interest being placed upon initial training for young people and more on continuing education and adult education. At the same time, greater importance is being attached to vocational training and education.

The EU bodies and CEDEFOP, and nearly all the Member States, governments and employers' and workers' organisations, are aware of this fact.

But there is still a lot to be done. Their ideas have to be put into practice; politicians, researchers and most of the players, teachers and trainers still have a long way to go. This is where vocational education and training research can play a major role in putting policy into practice.

Vocational education and training policy, more so than general education and training policy, is no longer feasible without looking over the other side of the fence.

The Member States are, of course, autonomous, and no-one would want to deprive them of their responsibility, but the Member States themselves are in competition regarding the quality of vocational education and training and in finding the best ways of meeting largely identical social, economic and technological challenges.

I have the impression that the national systems are moving closer with increasing speed and that reforms in all countries are going in the same direction.

You can compare this, maybe, to the development of new generations of cars, which look increasingly similar and are being adapted, faster and faster, to meet new demands in the light of new knowledge gained.

The questions of whether, and to what extent, the vocational education and training policy systems of the Member States converge or diverge, which aspects will be dealt with, where and how, which answers will be found, and through whom, and the best way in which the politicians, players and the social partners can be advised: these are, in my view, the main topics on which comparative vocational education and training should be based.

It is becoming increasingly difficult - was it ever possible at all? - to compare the systems of all the EU Member States with one another. The most that can be done is to compare particular aspects or certain areas.

We must also build up more "clusters" and concentrate on illustrating varying approaches to problems and ways of resolving them.

For the past few years, CEDEFOP has been encouraging greater co-operation between researchers in this field.

It publishes the "European Research Directory" (on CD-ROM) and has published the first "Report on Research and Development in Vocational Education and Training in Europe".

The report on research and development gives a broad overview of the current state of VET research and helps identify research priorities.

CEDEFOP, together with Eurostat and the Commission, compiles basic data in the field of vocational education and training in the EU (copies of the report "Key Data and Statistics on Vocational Education and Training" are available at this conference).

The European Research Directory has been developed to create a database on the Internet that may be continually updated.

Parallel to these main areas, measures are being prepared to "coach" networks to actively participate in the planning and implementation of new EU programmes, and to promote the development, also over the Internet, of new methods for research co-operation and the evaluation of findings.

For the past few years, CEDEFOP has been building up and developing its own research networks. Its pilot project was, and is, CIRETOQ, the research co-operation network on "Trends in Occupations and Qualifications in Europe". Another is the "Vocational Education and Training Professionals" network.

The first mainly focuses on socio-economic, macroeconomic and microeconomic scenarios and analyses of trends, sectional and regional studies and studies on the new demands which education and training qualifications must meet if the transition from training to work is to be a smooth one.

The second deals more with the content and curricula of training courses and how they have developed, the teaching and learning methods used, and the training and retraining of teachers and trainers in the occupational field.

Finally, CEDEFOP participates in a number of studies and analyses that have been running since 1995 under the Leonardo da Vinci Programme. It evaluates and disseminates its findings and participates in a number of research co-operation networks such as EUROPROF, VETNET and FORUM.

It is therefore only logical that we, together with the DIPF, undertook to organise this event, which, among other things, is aimed at offering researchers a forum in which to exchange information and experience, but also at providing them with the opportunity of giving the players at political level an understanding of their findings and recommendations, both at national and international level.

We, together with the Commission and CEDEFOP's Management Board , shall draw our very own conclusions from the results of this conference - and I am sure these will be extremely exciting results.

A networking of research in this area is emerging, structured according to topic or methodology, and the findings evaluated on a regular or occasional basis. It should be assessed in relation to the existing networks.

What role should, and could, CEDEFOP play in this respect? What role can be played by the increased use of modern communications technology? Video conferencing, the Internet and separate electronic networks, etc. have all moved into this field. They offer cost-effective and efficient alternatives to travelling to meetings and organising conferences, although they cannot completely replace them.

The next step being taken by CEDEFOP is the setting up of an "Electronic Training Village", which is to bring together experts in the different fields and all the available tools.

The reports drawn up by the DIPF and other institutes commissioned by CEDEFOP will give us some ideas on how to proceed in the near future in conceptual, technological and financial terms.

However, the most important thing is that the researchers themselves, during this conference, set out their interests and jointly clarify their needs in terms of support for their solidarity, co-operation and exchange of experience.

Then, CEDEFOP, and possibly also the European Commission, will be able to assess what more needs to be done in order to provide the necessary services and to advance the process of discovery.

I therefore wish the conference - and that is each and every one of us - great success. I hope that it will be able to make an important contribution to resolving the problems we face and to raising the profile of vocational education and training research in the Member States and in the European arena.

Ulrich Haase[3]

I should first like to extend the greetings of Federal Minister Dr Rüttgers, who wishes the conference every success.

I think it was an excellent initiative on the part of the DIPF, CEDEFOP and the European Training Foundation in Turin to get together to organise this congress. Such international co-operation is not always so easy. I see from the number of participants here, and the preparations made, that it is an obvious success.

I am particularly pleased that not only participants from the European Union countries are gathered here today, but also participants from the countries of Central and Eastern Europe.

This conference may be compared to a similar conference organised by the Ministry of Education and UNESCO in Hamburg in 1989 on the topic "Innovatory methods in vocational education and training".

Vocational education and training research is well-established in Germany, which has an extensive network of education and training research establishments: the Bundesinstitut für Berufsbildung [Federal Institute for Vocational Education and Training], the Deutsche Institut für internationale Pädagogische Forschung [German Institute for International Educational Research] and the Max-Planck-Institut für Bildungsforschung [Max Planck Institute for Education and Training Research] in Berlin, to name but a few. Other institutes have also been set up in individual "Länder".

The great importance placed on comparative vocational education and training research in Germany, particularly over the past decade, is shown by the large number of works that have been published in this field during this period.

Germany has done a lot of work within the OECD and UNESCO, and within the European Union, in defining uniform criteria and in establishing world-wide standards for comparing education and training systems. In view of the international nature of economic activity and, consequently, training, comparative vocational education and training research cannot be carried out without internationally agreed standards.

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[3] Federal Ministry of Education, Science, Research and Technology, member of CEDEFOP's Management Board.

The close co-operation between UNESCO, the OECD and the EU is paying off. Comparison between the education and training offered and education and training paths on the basis of internationally standardised data and facts is having an effect on policy decisions. Such comparisons are leading to analyses being carried out which show the extent to which specific policy objectives of education and training measures are being achieved, or not being achieved.

In the past four to five years, the European Commission has expressed particular interest in the field of vocational education and training. Although its simple assumption that youth unemployment can be directly combated by improving vocational education and training is clearly mistaken, improvements in the education and training system as a whole will help to strengthen the power of the national economy in the medium to long term, and thus also help to overcome unemployment. We should not, however, be thinking in terms of measures lasting two or three years, but measures covering considerably longer periods of time. As Wilhelm von Humboldt once said, the consequences of educational reform only show up a hundred years later. Today, a hundred years may be a bit too long to wait, but we will have to think in terms of decades, even if this may be difficult for a good many people in policy terms.

As European integration continues, it is becoming less possible to further develop vocational education and training systems from a purely national perspective, in spite of the reservations of the Member States about determining the form and content of vocational education and training. You will recall that when the Maastricht Treaty was being drawn up, the Member States placed the utmost importance on the formulation of Articles 126 and 127, in order to maintain their competence in this field. Though I see no contradiction between developing national systems on the one hand and integrating these national systems within Europe on the other.

World-wide economic competition is putting the national vocational education and training systems to the test. This raises the question of how the efficiency of a country's own vocational education and training system can be assessed vis-à-vis those of competitors on the world market and, if need be, changed? Comparative vocational education and training research must come up with the answers. This also works the other way around, by the way, as learning from other countries can, for instance, give rise to calls for making quick changes in your own national system. This is where comparative vocational education and training research can warn against taking ill-advised, overhasty action.

Turning now to the countries of Central and Eastern Europe, it is significant that the findings of comparative vocational education and training research were, and continue to be, very helpful in designing many of the reform measures. I consider investigation into the basic requirements for changing systems to be an important field for the application of comparative vocational education and training research.

Please allow me, as a member of the European Union's Advisory Committee for Vocational Training and of CEDEFOP's Management Board, to say one more thing in favour of European co-operation in the field of vocational education and training research. In my view, the present split between vocational education and training research in the research framework programme - which, by the way, has had too little emphasis placed upon it - and the "Analysis and Surveys" actionline under the LEONARDO vocational training programme does not bode well. In future, the resources for this very important area of research should be pooled. I think that what we need is a "European vocational education and training research" framework programme, which should be established under the umbrella of the new vocational education and training programme. Such a programme could be an important tool for promoting comparative vocational education and training research, the costs of which far exceed the funding available to many national establishments. Here too, incidentally, I believe a rewarding task lies ahead for CEDEFOP.

I should just like to mention in passing that CEDEFOP has successfully dealt with an extremely difficult move from Berlin to Thessaloniki, and today - just like the phoenix rising out of the ashes - is more productive than ever.

In future, Germany should be participating even more intensively in international research. Our partners expect us, and rightly so, to play a greater role in joint comparative vocational education and training research projects. This will be particularly relevant for European Union tendering procedures.

Today's conference should give us a chance to take stock of comparative vocational education and training research at international level, both with regard to methodology followed and organisational procedures used. It should refer to important topics of European vocational education and training policy and thereby contribute to analysis and the policy decisions.

I wish the conference every success.

Hans Konrad Koch (ETF)[4]

Ladies and gentlemen,

I am delighted that the European Training Foundation is taking part in this conference. Personally, it gives me gret pleasure to have the opportunity to meet up again, here, at this conference, with many of my highly esteemed colleagues, experts, from my previous career.

The participation of the European Training Foundation is a good example of the increasingly positive co-operation between CEDEFOP and the ETF. Like CEDEFOP, the European Foundation is a European Community body, though one of the newest. It was set up in 1995 in Turin, currently has 130 members of staff and deals solely with the countries of Central and Eastern Europe, the New Independent States of the former Soviet Union and Mongolia. At present, its work programme is being expanded to include the Mediterranean countries (the MEDA-Programme). The Foundation's task is to support these partner countries in reforming their vocational education and training systems. In addition, the Foundation provides technical assistance to these countries under the Tempus Programme.

Co-operation with CEDEFOP is crucial for achieving this task. It enables us to give important advice to the partner countries based on knowledge gained by the European Union and its Member States in the field of vocational education and training policy and research. It is not our intent that the partner countries should accept our advice without reflection, but that they should use it as important material for developing independent solutions for dealing with their respective situations. Such independent solutions can only be found and developed by the countries themselves.

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[4] European Training Foundation, Turin

This co-operation is naturally particularly crucial for the associated states of Central and Eastern Europe. As associated members, these countries have now entered into the second phase of their vocational education and training reform, which must now be aligned more closely to the vocational education and training requirements of the European Union. A good example of useful information on this subject is provided in the CEDEFOP research report being prepared by Manfred Tessaring. This material is of particular significance to our partner countries.

In participating in this conference, the European Training Foundation has sent researchers from the ten associated states of Central and Eastern Europe. In preparation, it carried out a study on the situation of vocational education and training research in sixteen of the partner countries, to which Professor Csákó will refer in his speech. The significance of comparative vocational education and training research for countries undergoing a transformation process stems, naturally, from the importance of vocational education and training for the success of this transition to democracy and a market economy. At a time when the partner countries are often undergoing radical changes in all areas of living conditions and the world of work, the reform of vocational education and training is taking on great importance, hitherto unknown. We have been through this in Germany with the unification with the new Länder. To say that, should really be a platitude. Unfortunately, the current, sometimes complex, structure of the preparatory measures for the accession of the associated states of Central and Eastern Europe reveals that often vocational education and training is not seen as a priority, on the European side or even that of the countries concerned, in this key phase of the transformation process, which is decisive for Europe. At the forefront are the vital need to lay down regulations on the formal adoption of the "acquis communautaire" and the alignment of the technical infrastructure. In this current phase, they overshadow too often, unfortunately, the importance of vocational education and training for this alignment process.

Assuming - and I take it that that is the general view here - that vocational education and training reform is important, and that there is an ongoing need systematically to support this reform in the interest of the benefits it offers the individual, society and the competitiveness of the associated states and other partner countries in Eastern Europe and Asia , vocational education and training research naturally plays a key role in implementing a reform which is as systematic as possible. We have seen that, in its initial phase, reform of vocational education and training was often determined by the events of the day. It is all the more important if the development of a medium and long-term conceptional framework for vocational education and training reform and the formulation of a vocational education and training policy for implementing this framework can be supported by vocational education and training research, and, for the time being, both national research, pure research and applied or development research.

Furthermore, "comparative" vocational education and training research is particularly important for these countries going through a transformation process. For the moment, the systematic comparison of countries going through the same dramatic change process, from state-controlled centralism and a planned economy to democracy and a market economy. By systematically critically reappraising the reform experiences of other comparable countries, we can learn from one another, and this provides a basis for developing new ideas and taking decisions in the field of vocational education and training policy, which should not be underestimated. This is especially true for the New Independent States of the former Soviet Union. Learning from each another provides a very important basis for systematically continuing vocational education and training reform. We should certainly also draw from the research into the changes that have taken place in the new German Länder which, in the meantime, has, unfortunately, been somewhat neglected. It should throw up some interesting ideas for us to work on.

For these reasons, the European Training Foundation is especially interested in the creation of a network of comparative vocational education and training research in Europe. Our participation in this conference is an important step in this direction.

The inclusion of researchers in the field of vocational education and training in the associated states of Central and Eastern Europe in this new network of comparative vocational education and training research in the European Union is particularly vital, and plays an important role. I have already referred to the second phase of vocational education and training reform in these countries, which must be aligned to the systematic preparation for accession to the European Union. It must be aligned to the role of vocational education and training in the Member States of the Union. It is a great benefit to be included in the Union's network of comparative vocational education and training research during this accession alignment phase: firstly, in order to understand the functions which vocational education and training has to fulfil in today's modern service society; secondly, however, to become acquainted with the different responses to this which have been found in the different vocational education and training systems of the Member States of the Union; and, thirdly, to learn from this how to work out independent solutions best suited to the particular situations in the respective countries.

Let me conclude by saying that this will be no unilateral West-East exchange. I am convinced that including researchers from Central and Eastern Europe will provide a rewarding East-West contribution to the mutual learning process. This was already the case in Germany, with exchanges between the old and new Länder.

I hope this conference will be of great benefit to us all.

Wolfgang Mitter (DIPF)

It gives me great pleasure to welcome you today in the name of the German Institute for International Educational Research (*Deutsches Institut für Internationale Pädagogische Forschung* - DIPF). Allow me to make a few introductory comments. I will be very brief, as I shall have a chance to speak to you again later. As the name of the institution implies, the German Institute for International Pedagogical Research has been strongly involved with international comparative research for almost three decades now, and within this framework it has paid increasing attention to VET research.

In recent years VET has indeed experienced rapid development, and I do not hesitate to emphasise Uwe Lauterbach's initiative in this connection. He has long been working for the consolidation of this area of research in our institute. For several years now, thanks to the support of the German Federal Ministry of Education, Science, Research and Technology and the Carl Duisberg Society we have been involved in research. One striking result is the International handbook of vocational education and training, which has now reached considerable proportions. It is constantly being revised and is due to be augmented soon.

We particularly welcomed the chance of making contact with CEDEFOP, and for myself I may say that we are exceptionally pleased about this cooperation, which is stimulating and has given us an opportunity to work together on a basis of trust. I believe that the tenor of this conference is evidence of the good start to this cooperation. We are also glad to have made contact with the European Training Foundation. We hope that this contact will grow, especially since the German Institute for International Pedagogical Research has been deeply involved for years in developments in education in Central and Eastern Europe. Thus, I think we have a good basis for further development.

In the coming days we shall hear a lot about international and comparative VET research, and for my part I would like to emphasise that this conference represents a good initiative. I hope that all participants will take home many stimulating ideas from the papers, plenary sessions and working groups, so that we can all strengthen our cooperation on the European level.

Erhard Schulte[5]

Socio-economic research at European Community level is not entirely new. It is new, however, in the form of a specific programme within a framework programme for Research, Technological Development and Demonstration activities. The Council Decision of 15 December 1994 was the driving force behind the *Targeted Socio-economic Research* programme (better known as TSER) within the framework of the Fourth Research Programme.

The TSER programme contains three main areas: (1) evaluation of the scientific and technological policy options in Europe, (2) research projects on general education and vocational training systems and (3) research projects on social integration and social exclusion in Europe. There are many different research objectives and tasks in each of these areas. It is worth taking a closer look at the original ideas behind this programme, and its development and implementation.

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[5] Civil servant in the Department of Research and Technology of the European Commission, and since 1999 Head of Section at the German Federal Ministry of Education, Science, Research and Technology.

The above-named Council Decision stated that this (TSER) programme would help to promote growth, increase competitiveness and develop employment in the Community, as set out in the White Paper "Growth, Competitiveness and Employment". The White Paper referred to here is the "Delors White Paper" of 1993, the seventh chapter of which deals with the adaptation of education and vocational training systems. This seventh chapter comes at the beginning of the third part of the White Paper, entitled "Employment".

When one is aware of these connections it is obvious that the TSER programme has its firm place among those Community policies which, both traditionally and currently, enjoy high priority. In other words – the TSER programme and also the section 'General education and vocational training research' must be considered in connection with general Community policies in the areas of 'the economy', 'employment' and 'social affairs'. Any research into education supported under the TSER programme should not be viewed as promotion of research for its own sake; it must conform with broader objectives targeted to economic and social issues.

This original connection played a dominant part in the further development of the TSER programme. There were three rounds of invitations to tender for project proposals, based on work programmes and corresponding to the stage of implementation the programme itself had reached. However the terms of reference for the various areas of research were formulated, the important issue, which came up again and again, was how the education and training systems could be optimised in order to fulfil the needs engendered by changes in the economy and society. The reciprocal relationship between (vocational) education and developments in the economy and the labour market was the central theme which pervaded all the TSER work programmes.

It deserves particular mention that research has convincingly fulfilled the programme's guidelines in general and also the priorities of the individual work programmes. When the TSER programme finishes now, after four years, a total of approximately 160 projects will have been initiated, with the participation of over 2000 researchers. Thirty-eight projects, with more than 200 participating researchers, are concerned with education research. Half of these education research projects focus on vocational education and training and labour market issues. In view of the scientific quality, the funds allocated and the duration of the TSER projects it may be assumed that these research activities will contribute significantly to a better understanding of all the factors which are important for the relationship between vocational education and training, employability and employment.

Whether the research results really produce the desired effects depends not least on the adequate dissemination of information. If new stimuli are to be provided for both science and for "end-users", particularly policy-makers, it is of fundamental importance to provide information on current research projects and thus stimulate general discourse. This will be achieved more readily if cooperation is sought with other activities and organisations relevant to the same area on the European level. For this reason those TSER projects which are concerned with VET research issues have been linked to other Community programmes and other European players.

The Bonn Conference on Comparative VET Research presented a good opportunity to make TSER activities known to a broader public, including researchers and "end-users". The following brief presentation of selected projects gives a first impression of the kind of scientific work carried out in the TSER programme in respect of VET research. It should become apparent how broad-based and also how diverse the research subjects are. It would be very positive if this brief introduction itself stimulated greater interest in the VET research community and then later, when more results are available, a more detailed discussion could take place.

In the coming Fifth Framework Programme for Research and Technological Development the importance of socio-economic research will become still more evident. This area of research will be introduced into the framework programme in two ways: as an integral part of other Specific Research Programmes and as a self-contained activity, as a so-called key action targeted to social science issues in the narrower sense. In this key action, which is divided up into main thematic areas in accordance with the priorities of current political and social scientific discussion, issues of education and training will not be the least subjects of research. It is to be hoped that education and training researchers react positively to this new planning structure by placing their

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work on a broader basis, with regard both to the scientific approach they employ and to intensified interdisciplinary cooperation.

2 Communication of the representant of the European Commission (DG XXII: Education, Training and Youth)

Sergio Corti[6]

First of all I have to convey you the greetings of Mr. Klaus Draxler, Director of Vocational Training Policy in DG XXII, who also sends his apologies for not being able to be here today, due to the many commitments he has these days, commitments which are linked mainly with the present and the future of the Leonardo da Vinci (VET) Programme, of which you all are only too aware.

I shall mention only some of these activities, those most relevant to the work you are doing here:

- next week in Brussels we are organising an Information Day on the current Leonardo da Vinci call for proposals. This event will be attended by more than 1200 people and you can appreciate the organisational effort;
- we are also organising in collaboration with a number of National Co-ordination Units a series of active monitoring seminars, involving the participation of a great number of projects promoters. Of these events the most relevant to you here is the one organised in Rome on 26-28 February which will be based on the Surveys and Analyses strand, the "research" strand of the Leonardo da Vinci programme;
- and last but not least, we are presently engaged in intensive reflections and a series of meetings for the preparation of the Commission proposal on the follow-up to Leonardo da Vinci and to the other DG programmes. This is a huge task, which also entails the fact that we have to take into account and filter all the inputs coming from the actors involved at all levels in Vocational Training in Europe.

All this just to show you that our limited participation in this conference is not due to lack of interest in research on VT, or in your work. In fact, as you can see from the transparency, with an investment of 20.7 MECU in the last three years, involving 135 research projects, Leonardo da Vinci, along with DG XXII, has been one of the major financial contributors to this kind of research and therefore also shows the importance we attach to it and the interest we have for its development.

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[6] Deputy Head of Unit in the Directorate B, Vocational Training Policy

Comparative research is particularly important because, as was said before by other speakers, the European dimension within the VET systems in Europe has to be built through a better knowledge of each other, a better knowledge of the scope and objectives of each system so that we can learn from each other where ever possible, however, while fully respecting the subsidiary principle.

There has been great progress in this field, but we think that there is a need for a major effort leading to further progress, especially in what could be a better and most efficient use of all available resources: human, financial, etc., including the resources and the results from the Leonardo da Vinci programme and from other European action and research programmes and activities.

We have to arrive at the establishment of a reference frame for systems' comparability, therefore we need to collect and collate all available knowledge. This means that greater emphasis has to be put on the dissemination of the results coming from all related activities and it also means that greater emphasis be put on co-operation between the various bodies active in the field.

Co-operation already exists between the Commission, Cedefop and the ETF, but there is always room for improvement and we have to improve in order to better share our knowledge and experience and work towards a common objective: transparency.

Transparency, the magic word which is mentioned in all key documents on VET policy and which is also mentioned in the "Report on Vocational Education and Training Research in Europe" published by Cedefop: Transparency of results, transparency in order to achieve a better understanding of systems and of their objectives.

We have nowadays a great opportunity, because the climate is favourable for VET in general and for research in particular. The recently signed Amsterdam Treaty and the Commission Agenda 2000 setting out the Commission priorities for the beginning of the next millennium, both put great emphasis on the so-called 'knowledge policies':

research, innovation, education and training. The community of VET researchers has to take advantage of this, they have to show that they know what they are doing and for what purpose, in order to improve their standing at the European level.

And not by chance, the recent Commission reflection paper, the communication issued to launch the debate on the future Education, Training and Youth policies is entitled "Towards a Europe of knowledge". You are at the heart of this Europe of knowledge, and the best way of showing it is to show, as I already said before, that the results achieved by your research are useful and usable at a political level.

Mr. Van Rens said a few moments ago underlined, that VET is at the cross-road between policy and practice. It is absolutely true. Research in this field must not remain academic research, it must be research that gives answers, that produces knowledge understandable and usable by those who have to take decisions.

A few words in conclusion on what I think this research should focus on in future. I quote here two of the elements included in the Commission communication "Towards an Europe of knowledge" previously mentioned: networking and terms of reference/comparable data.

- Networking or clustering is crucial. The establishment of co-operative networks to facilitate exchange of experiences and good practices, with the aim of pooling what constitutes the European excellence on a given subject or theme in order to create real European expertise capable of building capacity for diagnosis and action.

- The publication of the very first report on "Key data on Vocational Training" October 1997 has been a major step forward towards the establishment of Community sources of reference in VET. These need to be continuously improved in the form of further 'Key data' covering more issues in VET and improving the mutual knowledge of systems.

I repeat once again the main message: Comparative research in VET should aim at supporting the decision making process rather than remaining merely academic.

3 On the path to vocational training research with a European dimension: extending comparative vocational training research - safeguarding cooperation involving the social partners

Oliver Lübke, Klaus Schedler and Alphonse de Vadder

Oliver Lübke[7]

The European Trade Union Confederation (ETUC) and the trade unions represented on the CEDEFOP Management Board have long been calling for a conference on comparative vocational training research in Europe.

The trade union positions on this subject can be summarised as follows:

1. In the face of dwindling research funds and the generally recognisable wish of the stakeholders for change, negative examples stress the fact that we need both European concepts and also European co-operation on the management and activities of research projects and analyses in the field of vocational training. In this context it should not be forgotten that research traditions vary considerably from Member State to Member State within the European Union. The criteria for comparison have often been defined differently. Within the European context, however, we need ongoing comparative vocational training research. It is very important, on the one hand, to secure input from vocational training practice into vocational training research and, at the same time, to stress the service function of vocational training research for vocational training policy and practice. It should be borne in mind that the social partners are also political decision makers at the crossroads between science and practice. We have to look for ways of ensuring that all young people can obtain qualified vocational training and are given ongoing access to continuing vocational training.

2. Another aspect has to do with the corresponding research methods and the approaches adopted. This should be linked to the question of the effects of the individual European projects and programmes on policies: what areas should be tackled in vocational training research given that so far there has scarcely been any 'European' vocational training research? What subjects must be addressed in future and how can we guarantee action-oriented research which, at the same time, undertakes, evaluates and

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[7] Head of division for vocational training with the DGB (German TUC) Federal Board and spokesman of the employees group on the CEDEFOP Management Board.

also offers scientific back-up to the programmes and individual projects? What contribution can studies and analyses make beyond pilot projects to the European dimension of vocational training research? It will be particularly important to move beyond the approach involving a comparison of systems which was typical so far. The methods, approaches and criteria for comparative vocational training research in Europe must be constantly fine tuned and improved.

I do not wish to conceal from you that the high degree of interdisciplinary amongst vocational training experts, educational scientists, sociologists, statisticians, etc. is another obstacle to vocational training research. This necessary interdisciplinary does, however, provide an opportunity for competent European vocational training research to establish itself. This not only means the development of indicators for political circles and vocational training practice but also the establishment of networks and corresponding support structures by the competent EU institutions, i.e. particularly by the European Commission and its services. CEDEFOP should provide greater stimulus in this context and input its expertise.

3. The gap between vocational training practice and research, which is to be found in all Member States of the European Union, must be closed. Not only must we stress the relevance of research findings to a greater degree, they must also be taken over into daily practice. Here I would like to mention the increased synergy effects which could be obtained between the LEONARDO programme, the 4th Research Framework Programme and the work of CEDEFOP. This applies equally to studies and analyses within the framework of LEONARDO and to other programmes of the European Commission which must be evaluated and used to a greater degree than has been the case up to now.

4. Two areas of emphasis or main orientations can be derived from the decision in favour of the LEONARDO programme and current vocational training policy of the EU:

- maintaining quality standards in respect of the qualification needs of the employment system;
- providing sufficient opportunities for vocational qualification both in the field of initial and continuing vocational training.

The interpretation and concrete shaping of these goals must be oriented towards the needs of the employment system and, moreover, towards overall social developments.

Vocational training is of decisive importance for the qualification of the individual and the enhancement of the business location, Europe. Vocational training research analyses, accompanies and supports the developments shaped by the changes in the framework conditions.

Research work about the related issues takes in a large spectrum of curricula, conceptual development but also fundamental research. The social partners expect that the research scientists will not only be involved in updating and researching developments and changes in social and training processes but that they themselves will exert an influence by means of scientific back-up and proactive research on vocational development processes. They will identify innovative proposals and alternatives and play a part in their shaping and implementation. An important element for the social partners is the demand for co-operation between vocational training research staff and the individuals interviewed or studied in the research area. Scientific findings and demands should be understood in the practical context and not be restricted to the world of science. This approach aims to counteract a sometimes blinkered understanding of science which involves a highly rigid separation of theory (findings) from practice (implementation).

5. The social partners assume that CEDEFOP, BiBB, Cereq or public scientific institutions will develop the curricula and forms of acquiring qualifications and incorporate them into learning and teaching processes and that they will examine and, where appropriate, help to further develop the necessary statutory and political (also collective bargaining) framework conditions. Educational, labour-market and vocational research, i.e. also comparative vocational training research, must identify the interfaces and the common areas and weigh up the interests of the different players and target groups. This does not necessarily mean harmonising them. This applies in particular to questions concerning the structure and organisation or architecture of vocational training systems and their development.

6. In this context scientific policy advice on the basis of vocational training research can only bear fruit if it lays down and develops scientific standards and re-

search methods in a relatively independent manner. Opportune and current issues particularly in the field of educational policy are not really suitable research subjects. They should rather be addressed in a methodological manner in order to be able to offer the players decision- making aids. Research should be oriented towards vocational training practice and vocational training policy. There should be greater emphasis than there was in the past on the processes of vocational education in the context of its structural and organisational framework conditions and forms, including the company level.

7. For future concrete research contributions it is important to understand supraordinate goals which are able to promote overall vocational education and its development. The yardstick for research is its practical applicability in terms of content and the timely submission or targeted dissemination of its findings. This leads above all to the need for a fundamental orientation towards employment requirements. The interests of the clients and the people affected by research, i.e. governments, social partners, companies, trainees and employees, are the decisive factor and not theoretical, scientific or political ideas.

8. The focus of vocational training research is on studying the conditions, sequences and consequences of qualification and learning processes, the acquisition and assessment of vocational skills and the development of character. The postulate of skill and character development is of importance for two reasons. Firstly, it takes us to the expectations and demands of companies and plants in respect of educational policy and educational strategies and can, therefore, make an important contribution to safeguarding locations and economic development. Secondly, it means it is possible to implement an individual's training wishes whilst, at the same time, taking into account that individual's life and work plans. Consideration should be given to all these expectations. In this respect individual actions and a decision in favour of vocational and individual life and career planning should be more to the fore than it was in the past. This should not be confused with subjectivization. This is not just a matter of the contents but how the people involved deal with the contents and institutions. Considerable improvements must be made to their opportunities to be involved and play an active role in labour and labour processes by linking this with increased development

and application of the necessary social and communication skills, skills which are becoming increasingly important in the age of the knowledge or services society.

9. The development of vocational training policy can be characterised by means of the policy areas mentioned here involving a shift in emphasis from rather quantitative measures to quality-oriented structural improvements within the existing systems and reform policy approaches whilst, at the same time, maintaining continuity of change. Exogenous forces determine what type of policy and area of policy is dominant. This is shaped, for example, by demographic factors, by technological and economic developments and, last but not least, by the changing educational behaviour of the population in the context of a general change in values.

At present, the supply problem on the training place market, although important, is threatening to overshadow the quality issue. It would, however, be short-sighted and disastrous for the further development for instance of the learning venue, the company and dual or alternance training systems, if we were to play the quantitative and qualitative aspects of vocational training off against each other.

10. I would like to mention in particular the following main areas of research:

- constant observation and analysis of rapidly changing qualification requirements, maintaining the quality of initial vocational training, the reorganisation of existing and the development of new occupational and competence profiles for training as well as quality control of continuing vocational training;

- quantitative development of supply and demand in respect of initial and continuing vocational training; influence structures, incentive systems and co-ordination or planning requirements;

- development of preparatory and technical occupational skills in the process of initial and continuing vocational training, individual promotion and group-oriented shaping of vocational learning processes at various individual and integrated learning venues;

- organisation, co-ordination and management of vocational training institutions with special emphasis on improving the efficiency of in-company and out-of-company qualification schemes with increased use of multimedia resources and Europe-wide networks. This includes, amongst other things, researching the links between informal/decentralised learning (in companies) and systematic learning at other learning venues (e.g. school);

- structural problems and the extension of various vocational training systems in the context of regional, national and international developments.

Special emphasis should be given here to improving vocational training for women who are increasingly at a disadvantage in respect of vocational training programmes.

11. These areas are positioned in the context of a series of important issues for which a broad consensus must be found amongst all Member States and the organisations of the social partners on the EU level. These are the priority areas for which solutions must be found:

- guaranteeing extensive general education and initial vocational training for everyone. This will lead to qualifications which are recognised in the employment system and give access to further education and continuing vocational training;
- improving and extending the opportunities and guaranteeing access to continuing vocational training in the course of working life for everyone given the constantly changing economic, social and individual requirements;
- combating unemployment and calling for new forms of employment through investment in the training of workers and in industry but also within the framework of public and private schooling and in other vocational training institutions. This includes targeted measures for disadvantaged groups, e.g. foreigners or ethnic minorities, the disabled or groups from disadvantaged regions in the European Union;
- consideration within the framework of vocational training renewal of the demands resulting from the increasing computerisation of life and work in industry and society and the development of new occupational and qualification profiles or the restructuring of outdated ones;

- rethinking instruction and learning processes and the methods and the role of institutions such as schools, universities, companies, private households etc. as learning and teaching venues including the redefinition of the role of teachers and trainers;

- promoting geographical and occupational mobility.

This consensus I have described above is reflected in principle in the White Paper although I do not want ... to conceal the fact that the White Paper of the European Commission on 'Teaching and learning, towards the cognitive society' has considerably extended the research framework pegged out within that consensus.

12. In this context medium-term orientations for the future work of CEDEFOP have been laid down by its Management Board. Against this backdrop the starting point was transparency of the traditional core areas, qualification and vocational training systems as interfaces between skill generation and use. The term interface describes an area of contact between specific volumes of knowledge, specific areas of application and specific organisational structures for effective interaction.

The CEDEFOP Management Board has agreed on the following priority areas of work:

- studies and analyses of qualifications; this includes trends in the development of occupations and qualifications, sectorial and organisational framework conditions for the use of qualifications, social, regional and target-group specific framework conditions for the acquisition of occupational skills; core qualifications and renewal of the curricula of vocational training and;

- studies and analyses on vocational training systems concerning the transparency of qualifications, quality control and training organisation, socio-economic efficiency of systems and subsystems including the costs and financing, the transition of young people to the labour-market and their mobility, the development of teaching and training skills for vocational training practice, etc.

In conjunction with the ideas in the European Commission's White Paper of 1993 on 'Growth, competitiveness and employment' on general and vocational education and the answers from the joint opinions of ETUC, UNICE and CEEP the social partners outlined what contribution they themselves are prepared to make to safeguard qualified initial and vocational continuing training.

In this context it is important to stress in particular:

a) improved co-ordination between educational institutions and public authorities;

b) the importance of comparative research and;

c) the development of databases for the improved recording and anticipation of qualification requirements.

It should be pointed out in this connection that besides clear political guidelines, there must also be agreement on the main areas of emphasis in vocational training research. It should not be forgotten that competencies vary not only between the respective Member States but also on the European level, firstly in conjunction with the LEONARDO programme and secondly within the institution already mentioned by me, CEDEFOP (European Centre for the Development of Vocational Training) ... It will be particularly important to improve the co-ordination of the various activities and to avoid duplication of work. Furthermore it seems to me that we have to improve the working methods.

Improving the performance of vocational training and its ability to raise standards can be brought about by means of intensive, interdisciplinary co-operation, scientific backup, co-operation between research institutions in Europe and, last but not least, the involvement of the social partners in research projects. We, the social partners and, more particularly the trade unions and the DGB and ETUC are not only interested in this co-operation, we believe that it is absolutely essential in order to improve vocational training both in the field of initial vocational and in continuing vocational training.

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Klaus Schedler[8]

Education and training research is of particular interest from the economic viewpoint as it concerns applied research where vocational education and training is of primary importance and has a key role to play. Viewed thus, it is clear that the credibility of education and training research is determined largely according to the extent to which it is able to contribute towards the promotion of vocational preparation for young people and to continuing vocational training for adults. Comparative education and training research, too, is primarily applied research, from which employers and workers hope to benefit, in economic and social terms respectively. It is not therefore surprising that the social partners are becoming involved at national and supranational level in the field of education and training, and it is significant that CEDEFOP, for example, takes account of this circumstance in the composition of its Management Board.

Education and training research is, admittedly, not at the core of the social partners' political interests, but education policy still plays an important role in the day-to-day activities of employers' associations. In this respect, education policy is one of the political interests of our organisations as it provides the basic building blocks for the creation and future development of the economic and political framework conditions which help to ensure that our businesses and national economy remain competitive. It is not therefore surprising that employers' associations have education policy depart-

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ments. Involvement is particularly marked in countries where trade and industry participates directly in initial vocational training, particularly in apprenticeship training, or in continuing educational training, by providing education and training programmes in its own adult education establishments. Commitment extends to co-operation between public educational establishments such as schools and universities on the one hand, and trade and industry on the other. As a rule, though to varying degrees in the different Member States of the European Union, the social partners are substantially and sometimes directly involved in forming national vocational education and training policy.

However, within the European education systems there are not only differences regarding the influence the social partners can have on policy; above all, it is the wide diversity of education and training schemes, in particular in the vocational field, in the Member States of the European Union, which is of inestimable worth. Different strategies have developed in vocational education and training schemes according to the different national traditions, with the result that we have a situation today where, in the face of the challenges facing education and employment schemes in Europe, there is a multitude of different ideas for resolving identical or similar problems. Furthermore, in certain topical fields, such as improving transparency in skills acquired "on the job" or increasing the autonomy of educational establishments, a number of Member States have taken some remarkable initiatives and their experiences in implementing these initiatives can be put to good use in other countries.

At the same time, it should however be mentioned that this wide diversity of education and continuing education systems in Europe is more than confusing, and I fear that there is no expert in the field today who knows all the peculiarities of the national education systems in detail. Because these systems are constantly developing in order to keep pace with technical and economic requirements, it is becoming increasingly difficult to maintain an overview of the situation. At the same time, there are some experts who claim that national education systems will become increasingly homogeneous over the medium to long term because the demands placed on education are becoming increasingly uniform (introduction of new technologies, globalisation of the economy, etc.).

I do not share this view, but rather believe that education policy should contribute at all levels to the development and implementation of further, new ideas for resolving problems, to enable particular national characteristics to be put to the best possible use in meeting the demands of education and continuing education. One should therefore be able to use experience gained in one Member State for the benefit of another. This could then lead to an even wider diversity, with education systems pooling their efforts, as if in a research laboratory, in order to find continuing ways of improvement. A "blind frenzy of innovation" is not sufficient, however, to guarantee mutual exchanges of information in the field of education and training. What is also needed is a systematic analysis and evaluation of the outcomes of initiatives taken. This is where education and training research comes back into the picture. It is here, in my opinion, and for the following reasons, that comparative vocational education and training research should play a key role, in many respects, in the future development of education systems in Europe:

Comparative vocational education and training research helps increase our knowledge and understanding of what demands are being tackled, for what reasons, and in what way, in other countries in Europe;

The results of such research should enable us to learn from the different experiences gained in implementing new ideas on educational qualifications, so that we may apply these appropriately, at home;

Research also contributes towards the continuing development of education systems, i.e. it should help in the development of targeted education policy strategies and provide a basis for and assist in translating successful ideas into actions;

Comparative vocational education and training research can, furthermore, help to promote the development of medium-term education policy priorities.

To achieve these objectives, a number of conditions must be fulfilled. These include:

More vocational education and training research and - above all - more comparative vocational education and training research

Continuous dialogue in research at national and - above all - supranational level

Dialogue between research institutes, public administrations and the social partners at all levels of the European Union.

Alphonse de Vadder [9]

Being unable to attend the whole of this conference as I shall be leaving again tomorrow, I asked my colleague on Cedefop's Management Board, Mr Klaus Schedler, to set out the employers' position. I should like to express my gratitude to him for having agreed to participate in this meeting, ensuring continuity in the discussions today and tomorrow. Not wishing to contradict Mr Schedler, who has responded very ably to the various questions which were posed, I should like to highlight one or two aspects and provide some clarification.

We have already dealt today with the subjects of internationalisation and globalisation of the economy. In this environment, companies are striving for ever greater competitiveness, which has an impact on all aspects of business and human resource management, in particular as regards worker qualifications. I believe that there is a growing need for workers who have not necessarily acquired extensive knowledge or who have not acquired all the necessary knowledge but who have "learnt to learn", that is to say who have shown, throughout their life, an ability to continue to learn and to keep themselves abreast of changes. This provides a very favourable climate for professional training.

I believe that what is important is for training to be organised well and for training systems to be transparent. To this end, research, and in particular comparative research, may be of assistance to us in the fields we mentioned earlier. In this, I support the ideas put forward by Mr Lübke to the effect that research is needed into the quality of training, changes in qualifications, etc. This would give a clearer picture of what is being undertaken, although under no circumstances should it result in any levelling down or even elimination of the diversity which currently exists, since this could only lead to deficiencies. I believe that distinctive features and special characteristics of any kind, cultural and otherwise, must be taken into account.

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[9] Vice President of the Cedefop Management Board, Spokesman for the Employers' Group.

We therefore need comparative research. I thus applaud the initiatives taken by Cedefop in promoting this research, in consolidating research networks, and providing coaching and coördination in this field. The objective and end result are to provide all those involved in vocational training with a clearer idea of what is taking place. The findings of this research could be of assistance to them and could be taken into account in their activities at their own level in training centres and companies in their own countries. Comparative research could therefore lead to improvements.

4 The Val Duchesse Social Dialogue

Synnöva Aga and Manfred Tessaring[10]

The Social Dialogue in the European Union was launched in 1985 at Val Duchess (Belgium) by Jacques Delors, then President of the European Commission. The objective was that the European federations on either side should meet on round-table conferences and enter into mutual undertakings. Three major representative organisations, **UNICE** (Union of Industrial Employers Confederations in the EU), **ETUC** (European Trade Union Confederation) and **CEEP** (European Centre of Enterprises with Public Participation) decided to take the plunge, creating a new stage in Community affairs as they entered into roughly the same kind of social dialogue as is common in most of the Member States.

The Social Dialogue is pursued on the highest level by the Social Dialogue Committee, established in 1992. The Committee created two subordinate working committees, the 'Macroeconomics Ad Hoc Group' and the 'Education and Training Ad Hoc Group'.

The Val Duchess Social Dialogue has generated some 20 joint texts, hereunder

- joint opinions
- joint recommendations
- agreements.

Besides the Val Duchess Social Dialogue there are three other committees touching issues of education or training where the Social Partners are represented:

- the **Standing Committee on Employment** (set up in 1970) bringing together the European Council, the Commission and representatives of the Social Partners. In previous years, the Committee made several conclusions also concerning work, unemployment and continuing vocational training.

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[10] Cedefop-Project-Co-ordinators

- The European Social Funds Committee, which is co-determining on criteria, kinds of intervention and modes of application of ESF-rules to promote in certain regions, sectors or in view of certain target groups special employment and training measures.

- the **Advisory Committee on Vocational Training** (established in 1963) is made up of representatives of the Member States, governments, trade unions and employers' organisations. The Committee submits reasoned opinions on matters of general importance or of specific importance concerning vocational training.

2. *The work of the 'Education and Training Ad Hoc Group'*

The Social Dialogue Committee entrusted the Education and Training Ad Hoc Group with the task of re-examining earlier joint opinions in the field of vocational education and training. The results were published since 1995 and cover four themes:

- lifelong learning, both within initial training and continuing training
- guidance of young people
- anticipation, accreditation/certification and transparency of qualifications
- resources, funding, co-responsibility, co-investment

On these themes there were joint opinions; however, an 'agreement' could only be reached on 'vocational guidance'.

Concerning other themes, the Ad Hoc Group made particular comments, some of them being also related to CEDEFOP's work. These subjects were, for example: "qualifications", "finance", "glossary", "transferable and core skills", "certification and accreditation".

3. *The role of CEDEFOP in promoting the Social Dialogue*

From the very beginning of its work in the mid-70s Cedefop has been marked by a strong inclusion of Social Partners' in all its activities linked to the promotion of a common European Vocational Education and Training policy. The initiative for setting up Cedefop has been coming from Union Representatives sitting on the European

Communities' Economic and Social Committee in Brussels. Based on this initiative, the Commission prepared a proposal to the Council which in 1975 brought about the founding regulation for setting up of Cedefop.

Within an enquiry carried out by CEDEFOP in 1995/96, the Social Partners made several requests regarding the work of CEDEFOP. The essential claim was that the Centre should play a major role to provide a forum of exchange. Concluding, *"the Social Partners need the full support of CEDEFOP in order to meet the various demands they are expressing. They therefore believe that CEDEFOP should give considerable thought to this matter in close co-operation with the Commission, with a view to disseminating high-quality work to needs expressed by them."*

The following five priorities were concluded:

1 providing a place for discussion and training;

2 deciding on its target groups and users;

3 structuring working hypotheses together with the Social Partners, in particular on: qualifications, funding, orientation;

4 linking the social dialogue and the practices of the Social Partners;

5 monitoring the field of vocational training and taking into account the state of research.

These requests on the whole have been taken up within the Medium-term Priorities of the Centre, covering the period 1997 - 2000.

CEDEFOP even if it has no formal position in the Social Dialogue, however, plays a supportive role. It is the link between the work of the Social Partners within their national boundaries and the pursuit of the European Social Dialogue where CEDEFOP can fully perform its tasks as a facilitating, coaching, moderating and servicing institute. CEDEFOP is to support the European Commission in encouraging the promotion and development of vocational education and training as well as in-service training and to contribute to the work and their policy activities of the other groups and bodies

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represented in the Management Board, e.g. the governments, employer organisations and workers unions from all Member States and EEA-States (Iceland and Norway).

The 1998 Work Programme of CEDEFOP defines this role more clearly. Some of the main issues are:

- to observe and to assess trends in the development of occupations and qualifications;
- to analyse the responses to these trends in terms of changing training provisions;
- to promote innovation within the diverse systems of vocational education and training;
- to further the accreditation of prior or non-formal learning;
- to improve the transparency of qualifications in view of contributing to the mutual recognition of qualifications and competencies;
- to analyse the links between training and the labour market;
- to work for an improvement of multi-lingual glossaries;
- to permanently observe and monitor developments in vocational training;
- to promote research co-operation and to provide an overview on the state of research on vocational training in Europe;
- to analyse ,disseminate and update (key) data and statistics on vocational education and training.

4. *Final remark*

The inclusion of Social partners in questions linked to the European VET-Policy has a long tradition arising from the European Coal and Steel Union set up after the 2nd World War in the early 50's. On the one hand it seems that their involvement is rather strong and they have a high degree of influence backed by specific institutional arrangements. However we have to affirm by several investigations that this involvement and influence is varying depending on traditions in the respective Member State, in certain branches or occupational groups. The legal arrangements of the Treaty, the work of Cedefop in the past and the social dialogue in recent years have been contributing to a certain approximation of attitudes and institutional arrangements in the different Member States especially what concerns the social partners' participation in preparing and implementing political actions on State level as well as on regional or local and branch level[11].

The deepening and widening of the Social Dialogue taking place on the European or National level still seems to be a major problem: How to match top-down with bottom-up approaches, how to ensure a permanent feed-back between practitioners/clients and political/ social actors, how to improve the necessary research and development work in order to better feed and enrich the social dialogue. On this line a lot needs to be done and the comparative VET-Research efforts do offer an important assistance to that.

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[11] See the numerous studies Cedefop has been published on this issues in the early 80's

Aspects of methodological and research-strategical nature

1 European Cooperation in Vocational Education and Training Research

Pekka Kämäräinen[12]

Introduction

The following reflections can be grouped into two main parts. The first part tries to give a picture of the changing role of CEDEFOP within the changing landscape of European co-operation that is related to Vocational Education and Training Research (in the following: VET research). The second part deals with recent tendencies to establish network-based co-operation on European level and to consolidate scientific communities for European VET research.

The first part tries to explain what kind of changes have taken place concerning 'the perspective of CEDEFOP'. In detail, the first section gives a picture of CEDEFOP's changing position towards VET research in different evolutionary phases of the Centre. The second section presents some reflections on the changing role of European co-operation programmes (and related platforms) for consolidation of a European research culture within VET research. The third section gives an insight in CEDEFOP's instruments to create a more transparent picture of current European VET research and of the recent initiatives to facilitate network-based research co-operation on European level.

The latter part draws the attention to the developments within European VET research and towards the kind of working interfaces that we are trying to create between research cultures, policy-initiatives and practical development of VET. In detail, the fourth section gives a characterisation of some main tendencies to establish European networks that in order to cover major fields of European VET research. In this context also CEDEFOP's particular role as a facilitator is reflected. The fifth section focuses on the particular role that comparative VET research can play in the European landscape of research co-operation within VET research. Finally, the sixth section presents

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[12] Project Co-ordinator,CEDEFOP

- instead of conclusions or definite proposals - some open questions concerning further co-operation and follow-up measures.

I. Development of CEDEFOP and its role in European research co-operation

1. The role of 'research co-operation' in the evolution of CEDEFOP

Parallel to the development of CEDEFOP as a European organisation of the EEC, EC and then EU one can distinguish several evolutionary phases. In the following these are summarised in a nutshell in order to stress the role that has been given for activities that involve directly or indirectly VET research:

- In the first phase of its history CEDEFOP was the European organisation for the development of vocational training. In all its fields it took initial steps to bring experts from Member States together to common platforms and to compile information from national sources. The CEDEFOP contribution *to promoting* 'research co-operation' *included* short-cycle surveys and analyses and an annual Forum of Directors (or of Heads of Research) from national agencies which in the main discussed current research priorities within the respective Member States and on the European level.

- In the second phase the activities of CEDEFOP were adjusted to a coexistence with the Task Force Human Resources, Education, Training and Youth (TFHR) of the European Commission. The division of labour between the two European bodies was characterised by the fact that the Task Force was in charge of the European action programmes in the field of vocational training. At that time CEDEFOP was charged to provide an overview on training systems and to promote the comparability of vocational qualifications together with other complementary tasks. The focus was on policy-advice on the Community level.

- In the third phase (after the Maastricht Treaty, the establishment of DG XXII and the relocation of CEDEFOP) CEDEFOP has been repositioned as an interface between Commission, the Member States and experts/researchers in the field of VET. Concerning the earlier division of labour this has implied a shift to link CEDEFOP activities with the ongoing EU-programmes (in particular the action programme Leonardo da Vinci). Concerning 'research co-operation' CEDEFOP has taken initiatives to be in a more direct dialogue with communities of researchers and with major European co-operation projects.

On the basis of this nutshell description one could come to an interim conclusion that CEDEFOP is more related to policy-development and at best can engage itself as an external facilitator of research co-operation. However, this picture needs further elaboration.

2. *Developments of European platforms and European co-operation programmes*

Concerning the evolution of European co-operation programmes (or platforms for European research co-operation) one can distinguish the following evolutionary steps:

- In the initial phase of CEDEFOP its contribution to 'European research co-operation' was included elementary surveys and analyses which provided a common but not very consolidated basis for debates on a common 'research culture'. However, CEDEFOP created a forerunner for a further European platform by establishing an annual CEDEFOP Forum of national centres for VET-related research and development.

- In the next phase separate *EC*-action programmes (of the programme-generation of PETRA, COMETT, FORCE, Eurotecnet) provided the main platforms for operative 'research co-operation' (however, continuing with the format of surveys and analyses). Each of the action programmes had its own platform-generating efforts. However, it is worthwhile to note that none of the programmes was launched with an explicit aim to promote a research culture in the domain of VET research.

- In the subsequent phase the action programmes for vocational education and training were merged to one integrated action programme (Leonardo da Vinci - co-ordinated by the European Commission's DG XXII with the assistance of a technical agency). Within the framework of this programme there was a particular strand for 'surveys and analyses' which provided a basis for *a* certain kind of insertion of 'research components' to an action programme. The longer project cycles (2 or 3 years) and the introduction of multiplication-projects gave some more space for researchers involvement.

- Parallel to this development, the Commission's 4th Framework Research Programme (co-ordinated by DG XII) was launched with a specific sub-programme for Targeted socio-economic Research (TSER). One of the strands of this programme was dedicated to research on education and training. Another sub-programme on Training and Mobility of Researchers (TMR) was designed to provide support for networks and 'summer schools' for, in the main young, researchers.

- In the present transitional phase outlines of a new action programme for education and training are under preparation and the main issues of the 5th Framework Programme for Research are taking shape. Concerning the new action programmes (the successor programmes of 'Socrates' and 'Leonardo da Vinci') it has not been clarified to what extent they will provide a basis for 'research components' that support particular pilot projects or a more focused monitoring of the programme. Concerning the 5th Framework Programme of Research it is already known that there will be no special strand on targeted socio-economic research (including VET research). Such research, however, could be promoted within the thematic research strands (e.g. 'information society') or within the horizontal strand (e.g. 'improvement of human resources').

The more recent development of platforms and programmes/strands can thus be summarised in the following way:

a) In the phase when there were no major European co-operation programmes and in which the European 'research culture' was characterised by closely policy oriented surveys and analyses, the CEDEFOP Forum had a cohesive function. Later on (until the move to Thessaloniki) the CEDEFOP Forum continued to provide such a function for 'agency-related surveys and analyses' that were promoted by the national agencies.

b) The first European action programmes provided frameworks for 'surveys and analyses' in the above mentioned sense. In the Leonardo programme the strand for 'surveys and analyses' has de facto provided opportunities for more far-reaching projects which have a deeper impact on European research culture and VET research development in Europe. Some partnerships have launched complex research themes that provide a basis for a long-term co-operation which. However, such co-operation needs to be developed within several project cycles.

c) The existence of a targeted programme to enhance socio-economic research (including research on education and training) stimulated efforts to further develop a European research culture within VET research. The 'moral support' effect has probably been more important than the actual number of projects (of VET research) that have been funded from the said programme. However, the transition to the new framework requires that VET research cannot be promoted merely as research on 'education and training' but as research on 'education and training components' e. g. of the 'information society' or within the broader theme of 'improvement of human resources'.

Concerning involvement of CEDEFOP in the recent developments *it* is worthwhile to mention that the Centre has

1) engaged itself in active collaboration with several transnational projects and has got an 'inside view' in the actual work of transnational research partnerships;

2) given active support for creation of new partnerships and prepared room for such activities within its networks or network-like activities;

3) engaged itself in several measures to summarise and capitalise the outcomes of European co-operation projects (in diverse programmes) that have been working with themes that are of interest for the Centre.

3. CEDEFOP activities to support research co-operation

It has become necessary for CEDEFOP to develop itself a strategic concept of its role in European research co-operation. Although the work for such a concept has not yet been completed, some elements can already be indicated.

Firstly, it has become necessary to distinguish between two levels of 'research co-operation':

- *thematic level* of research co-operation (which refers to focused co-operation within diverse CEDEFOP's projects and fields of activity)

- *infrastructural level* of research co-operation, which refers to particular instruments that make European research co-operation more transparent and/or to measures that are related to European co-operation programmes and to consolidation of established networks.

CEDEFOP's new instruments and/or initiatives to support European research co-operation are the following:

a) The *European report on research and development* gives a summarising 'group picture' of current research and/or research and development activities. It aims to be comprehensive but at the same time it tries to give room for more elaborated debates on some priority themes.

b) The *European research directory* is being developed towards an Internet-based database on current research in the domain of VET. In the recent steps it has been supported by tele-working and it is being linked to network-based assessment of the current stand of VET research in the Member States *and on the European level.*

c) Parallel to these main instruments CEDEFOP is developing new initiatives for *'coaching the networks'* in order to support a consolidation of 'main frame' networks that are capable to organise co-participation of scientific communities in the new EU-programmes. With this activity CEDEFOP also tries support development of new tools for Internet-based research communication and a better capitalisation of research results.

Given these new developments, it is probably justified to suggest an interim conclusion that CEDEFOP is making serious efforts to develop new kinds of interfaces between research policies (e.g. research programmes), communities of researchers (and research activities) and processes of knowledge utilisation.

II. On the development of communities of research within European VET research

1. Diversity of approaches - room for a more cohesive development?

Concerning the scientific consolidation of VET-related research one is confronted with the fact that the domain of VET is not covered by strong research traditions. Usually the domain is perceived as a multidisciplinary area which doesn't necessarily provide a basis for specialised research disciplines. Researchers that specialise on the domain of VET are normally extending their expertise beyond the normal scope of their basic disciplines. In their research work they themselves are developing interdisciplinary research approaches and in their scientific co-operation they are contributing to an interdisciplinary research culture (which is sometimes marginalised by the basic disciplines).

In fact there is a case to argue that the domain of VET is not merely a diffuse multidisciplinary which is occasionally addressed by various research interests. Despite all the diversity of background disciplines and focuses there is a tendency towards a more comprehensive and integrated interpretation of VET-related phenomena by the committed researchers. In CEDEFOP this tendency is taken into account and therefore the domain is referred to with the integrative notion of 'VET research'.

In a similar way there is a case to argue that the scientific knowledge accumulation is not characterised by a non-structured multitude of interdisciplinary approaches. Instead, there are efforts to give shape to particular sub-domains of VET. As such one can consider research that focuses on

- the socio-economic context of VET,
- the political and organisational steering of VET,
- the pedagogic and curricular context of VET and
- individual and societal choices concerning VET.

There is a growing awareness that such sub-domains are related to different research needs, to different methodologies and research outcomes and to different modes of

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knowledge utilisation. This can be taken into account as a necessity for connective specialisation within VET research.

The tendencies towards a more integrative understanding of VET research and towards connective specialisation give a good basis for a more systematic development of network-based research co-operation. For CEDEFOP there are two basic options for supporting such co-operation. On the one hand it can commit itself directly to be the host organisation for European networks. On the other hand CEDEFOP can involve itself to support external networks by developing a 'coaching relation'.

In the following the main examples of both types are briefly presented:

So far there is one pioneer case for research co-operation networks that are directly hosted by CEDEFOP: the CIRETOQ network (Circle for Research Co-operation on European Trends in Occupations and Qualifications). The network combines a broad spectrum of research approaches that focus on

a) macro-economic forecasts and trend analyses;

b) sectoral and regional studies on new skill/competence needs/developments and corresponding training strategies;

c) new societal challenges at the interfaces between education/training and socio-economic/employment development and

d) utilisation of prognoses and scenarios within policy development.

In addition CEDEFOP is developing a 'coaching relation' with some external research co-operation networks. Some of these cover a broad range of research areas whereas other focus more closely on the socio-educational context of VET. By developing a 'coaching relation' CEDEFOP tries to promote synergy between three major networks (the Forum network, the Europrof network, the VETNET[13] network established within the EERA[14]). Moreover, CEDEFOP tries to enhance the European research culture, in particular concerning the socio-educational context of VET. to stimulate the development. Concerning the latter aspect the particular interest is to promote European co-operation within the following areas of research:

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[13] VETNET: The VET-related network that has been launched by the EERA; organiser of the VET-related strand in the annual ECER-conferences (see below).

a) research on new learning designs that integrate 'work process knowledge' and 'competencies for social shaping of work and technology' into curricula for vocational learning;

b) research on new curriculum designs that provide new linkages between 'general' and 'vocational' education;

c) research on new 'synoptic assessment' and on the role of assessment regimes in promoting lifelong learning;

d) research on the role of 'new training provisions' and of 'new training professionals' in facilitating industrial and regional innovations.

However, while making progress in these two directions CEDEFOP has become more aware of the need of a 'bridging' field in view of promoting a kind of research co-operation that would more directly focus on policy-processes and on the systemic or institutional steering of VET. From this perspective CEDEFOP has engaged itself in a discussion concerning the prospects of comparative VET research as a particular field of research co-operation.

2. *The importance of comparative VET research*

The particular importance of a comparative research expertise can be related to the picture (that has been given above) in the following way:

1. Comparative VET research can be considered as particular field of research within the overall domain of VET research. According to this view there is a need to develop a specialised research expertise that compares different systemic, policy-

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[14] EERA: European Educational Research Association - the European umbrella-organisation for national associations for educational research and for national research centres within educational research; organiser of the annual European Conference on Educational Research (ECER).

related and cultural preconditions for the development of VET provisions in their respective societal contexts.

2. From the perspective of CEDEFOP it is worthwhile to note that this kind of expertise has been hitherto developed on the level of particular projects and individual researchers but not in a systematic way by organised scientific communities or by established networks. Moreover, it is worthwhile to *note* that this kind of expertise is only in the process of approaching such themes like 'organisation and management of VET systems', 'development of quality management and quality indicators', 'evaluation of effects of targeted support measures'. Finally given the current stand of research there has been *too* little effort to develop exchanges that would support cross-fertilisation of parallel *projects and* approaches.

3. Comparative VET research can also be considered as supporting expertise that contributes to other fields of VET research. The basis for such support *lies* in the accumulated knowledge on the functioning of different systems, on the patterns of policy-development and on the underlying societal values that provide a basis for diverse VET cultures. With reference to an accumulated knowledge-base comparative VET research can engage itself in a dialogue which supports more specialised research approaches in their respective tasks.

The supporting function can be related to the following types of studies:

- *multinational studies on skills, competencies and qualifications* (support for a more focused linking of such research questions and results to the respective national contexts of VET development and for taking into account the current pattern variance);

- *transnational co-operation projects that accompany or evaluate pilot projects within curriculum development and shaping of teaching/learning environments* (support for analysing the systemic and policy-related preconditions for and limits to successful innovation transfer);

- *regular surveys on VET-related individual choices or on career patterns that provide feedback on the functioning of VET systems or on particular policy-measures* (support for linking such findings to a comparative reflection on the functioning of the systems and/or on the impact of particular policy-measures).

In practical terms this kind of support can be provided in different phases and different contexts of research work:

- in the phase of project-preparation comparative VET research can provide pre-monitoring assistance;
- in the phase of project-implementation comparative VET research can be engaged in different kind of accompanying roles;
- after the implementation of project comparative VET research can be engaged in secondary analyses and in organised reflection that links the outcomes of several parallel projects.

For CEDEFOP it is of major interest to verify whether it is possible to organise this kind of support for transnational projects and to develop better patterns for capitalisation of their outcomes. It is also necessary to reflect whether this kind of engagement of comparative researchers could support the scientific consolidation of comparative VET research.

3) Finally, comparative VET Research can support for valorisation of particular research results. This kind of mediating expertise becomes important when particular national-specific or compiled research results are brought into 'comparative' discussion (before having been validated in a proper comparative reflection). This kind of support can best be given via an organised dialogue between researchers and policy-makers from different countries. In such settings comparative VET research can facilitate mutual learning processes. In particular research can draw attention on different patterns of policy development and policy assessment (and on transferable aspects in different policy cultures).

Concerning the users' point of view it is worthwhile to take into account two additional factors that may give comparative VET research more weight in the future:

- Several Member States are confronted with structural problems in their VET systems. In many cases the basic pattern for providing VET opportunities are threatened by erosive tendencies. On the other hand there is a growing awareness that VET provisions have to meet several new quality requirements (both concerning the training itself and concerning the training management). This leads to an increased interest for learning from other VET cultures and from their strong and weak points.

- The enlargement of the European Union and/or of the space of co-operation within European programmes (including the EEA[15]-partners and the countries that have an accession agreement with the Leonardo programme) makes simplistic comparisons *between individual Member States* more and more obsolete. In view of these processes there is *a crucial* need to study the 'whole European house' from the perspective of cultural clusters and political sub-regions. Comparative VET research can *thus* contribute to a deeper understanding of the new geopolitical preconditions for European co-operation.

3. *Instead of conclusions - some open questions*

The reflections above give an impression of the variety of the functions that comparative VET research can have. However, all these reflections are based on the assumption that the scientific community finds appropriate ways to 'join forces' and that the funding bodies recognise the need to support the kind of support and mediating activities that have been mentioned.

In this context CEDEFOP wants to underline its role as an intermediate agency which tries to support both

a) a further consolidation of communities of VET research (on the basis of scientific interests) and

b) the development of processes of valorisation and dissemination of the outcomes (on the basis of focused exchanges between researchers and policy-makers).

In the current situation CEDEFOP wants to proceed further with its co-operation with research communities - not to limit itself to a co-organiser of ad hoc conferences that present some recent findings. However, CEDEFOP does not assume itself to have a one models how to develop the best pattern for supporting a consolidation of comparative VET research. Neither does CEDEFOP claim to have found already the best ways to organise a dialogue between researchers and policy makers. However, CEDEFOP has a genuine interest to contribute to the further development of a European research culture in VET research. Moreover, CEDEFOP wishes to support accumulation of knowledge and a better capitalisation of the outcomes of comparative VET research.

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[15] EEA: European Economic Area - the joint legal framework for cooperation between the EU and the EFTA countries that have ratified the EEA-agreement (Iceland, Liechtenstein, Norway).

From this perspective we want to pose some questions concerning further European co-operation, which we think should be discussed among comparative VET researchers:

a) Is there a common need for a European network or a pattern for regular co-operation that focuses on comparative VET research? And if there is such a need, is there a willingness to keep the co-operation open for the diversity of research approaches that can be included under the label 'comparative VET research'?

b) Is there a common need *to organise a debate on quality criteria and new methods* for comparative VET research? And if there is, is it feasible to organise such a debate as a common one *or* is it necessary to identify particular 'main strands' of comparative VET research? Finally, is it possible to reach common conclusions that would do justice to the plurality of approaches?

c) Are there particular initiatives that could be promoted as 'infrastructural' initiatives in the domain of comparative VET research (i.e. initiatives that would require a broad participation and would give remarkable support for a number of related smaller projects).

d) Is there a willingness to organise a particular support service for transnational co-operation projects to upgrade the use of comparative VET research (in particular in the contexts of preparing transnational projects and in the context of interpreting the findings of particular projects with a transnational relevance)?

e) Is there a willingness to organise regular events that support a focused valorisation of the outcomes of comparative VET research?

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f) If all the answers lead to a conclusion that a new network (or regular network-like activity) should be launched, what should be the distribution of roles, e.g. between CEDEFOP, specialised research institutes and individual researchers and what kind of balance should be reached between different modes of work: electronic communication, open events, focused workshops and activities that are related to particular projects? If the questions lead to positive answers that give clear focuses for the further co-operation, another set of questions has to be posed concerning the organisational and financial aspects of the co-operation. At present it is the time for a broader discussion to find adequate answers.

2 The state of (comparative) vocational-training research in the European Union[16] - results of a preliminary study

Philipp Grollmann and Burkart Sellin

Introduction

Many are the pronouncements on the growing importance of international and comparative research into education and vocational training in connection with the political process of European unification and supranational co-operation. Not only do we encounter such pronouncements in national and supranational discussions; they also appear in literature on research strategy or vocational-training policy, including contributions to the present volume.[17]

Comparative or supranational research goes hand in hand with international co-operation between research establishments or individual researchers. The researchers engaged in such co-operation not only learn from each other about the subject of their study (e.g. the vocational-training systems of the participating countries or regions) but also acquire knowledge about diverse national and linguistic – or, to use a more general term, cultural – characteristics of scientific research and the conditions to which it is subject in the various participating countries. The acquisition of knowledge is of the essence in supranational research.[18]

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[16] The other countries of the European Economic Area (EEA) are also taken into account

[17] Cf. examples such as the Austrian Institute for Vocational-training Research (Österreichisches Institut für Berufsbildungsforschung), 1991, the German Research Society (Deutsche Forschungsgemeinschaft), 1990, Möllemann (1990), Koch (1991) and Hörner (1997).

Besides the diverse national traditions in the realm of vocational-training research, discipline-like structures are developing at the level of the European Union. These may take the form, for example, of repeated communications on issues, subjects and topics relevant to the research field of vocational training. This development is occurring in connection with an ever-increasing level of publishing activity.[19] While similar *numbers* of major players are active in the field of vocational-training research at the national and international levels, they are not necessarily the same players.

Apart from some initial probing,[20] the field of knowledge described here has scarcely been documented in any detail. The present paper collates some of these initial findings and is designed to encourage further study. It borrows, though not exclusively, from interpretative models rooted in the tradition of comparative educational research.

In view of the diversity of national and cultural understandings of vocational training and of research, and hence of vocational-training research,[21] we propose the following definition as a working basis:[22]

Vocational-training research is the study, on the basis of scientific criteria and appropriate methodology, of personal and social conditions, of the processes involved in imparting and acquiring knowledge and skills and the outcome of those processes, and of attitudes and behaviour patterns which have a particular bearing on potential or actual roles in the economic and social division of labour.

The underlying factor here is the condition that such knowledge, aptitude and skills, as well as attitudes and behaviour patterns, can be reasonably distinguished from those that are considered less relevant to the role under examination.

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[18] See for example the Drexel contribution to this volume.

[19] In particular, cf. CEDEFOP publishing data for the period since the early and mid-eighties.

[20] See the Dietzen and Kuhn compilation of 1996 and the CEDEFOP report, which will henceforth be appearing every two years (Tessaring, 1998).

[21] Cf. for example the Heikkinnen contribution to this volume.

[22] Adapted from the definition formulated by the German Research Society Senate Commission on Vocational-training Research, 1990.

We believe that these are the features which are common to all research activities in the field of vocational training, irrespective of the national or disciplinary traditions in which they are rooted.

Even the use of particular words has to be put into a cultural and social context. The German *Beruf*, for example, can be a profession or a trade in English. Nor does every European country have the same occupational structure. The terms 'vocational education and training (VET)', '*berufliche Bildung und Ausbildung*' in German and '*formation professionnelle*' in French have gained fairly general currency in the European discussion.

In the linguistic usage of UNESCO, for example, it is more common to see the term 'technical and vocational education', which has connotations of a more classroom- than workshop-based system.

The present study cannot and does not provide an inventory of vocational-training research in the Member States, i.e. at the national level. It does, however, cite a few examples to illustrate the problems facing anyone who tries to compile such an inventory. It also highlights some of the gaps in research and documentation. At the European level, the situation is relatively transparent. The information on which this paper is based has been drawn from the cited reference sources and from the results of two surveys.

During the preparations for the conference, specialists throughout Europe were invited, through electronic networks and the CEDEFOP Internet homepage, to express an interest in attending the conference and to complete a questionnaire about their supranational research projects. The questions related to three aspects of research: the nature of the international co-operation, the methodology used and the disciplines involved. Another questionnaire was addressed to vocational-training researchers in the United Kingdom. It covered the following areas: the history and development of British vocational-training research, the disciplines involved, the main research subjects and the relationship between researchers and the bodies commissioning the research. In addition, we consulted all accessible literature relating to the subject of our study.

The main variable dimensions of vocational-training research include the *substantive definition of the subject* under examination, the *disciplines* to which these subjects are considered to belong and hence the *information* which scholars of that discipline will seek to acquire, the *methods* used and the *institutional framework* within which the research is conducted. There are logical as well as empirical interconnections between these dimensions. If vocational-training research is understood as the study of a *social practice*, the prevailing *balance of political, social and economic power* and the *institutional framework* may have a significant bearing on the other dimensions too.[23]

The following sections provide a general review of the dimensions identified above at the level of the Member States and at the level of the European Union. The review of the situation in the Member States, however, can only be presented in rough outline. In this study, the term *European vocational-training research* is used to describe the relevant research activities that are commissioned, conducted and funded pursuant to a decision taken independent or jointly by the European Union. There is, of course, a considerable volume of national and international research into vocational training which lies beyond the scope of our definition.

1. *Vocational-training research – subject matter and disciplines*

The definition of the subject matter of vocational-training research and the disciplines from which the researchers are drawn are far from being clear-cut and depend to a great extent on regional, sectoral and national circumstances.[24]

As this volume makes clear, each individual country's definition of vocational training is very heavily dependent on its own educational and social history.[25]

The academic discipline of vocational education (*Berufspädagogik*) in the German-speaking countries is closely connected with the training of instructors for technical colleges (*Berufsschulen*), which has been done at university level since the sixties. *Berufspädagogik* is both a generic and a specialised term, in the sense that it is used primarily to denote training in technical trades for manufacturing industry and small craft businesses. The traditional separation of vocational or technical education and commercial education in the German-speaking countries may be highlighted as a prime example of the way in which history shapes the profile of vocational-training systems. Even the academic study of technical subjects derived from the trade schools in Germany at the end of the 19th century. The higher commercial colleges (*Handelshochschulen* or *Wirtschaftshochschulen*) were a subsequent development. The division into these two streams of teacher training[26] is therefore a legacy of the historical differentiation between two different institutional frameworks (on the one hand the higher commercial colleges, where teachers are trained for commercial colleges, and on the other hand the technical-education departments of higher technical colleges or universities, where trade instructors are trained). Although these institutions originally engaged exclusively in the training of teachers or instructors, the lecturers who worked there gradually developed an academic interest in their respective forms of training: technical training and commercial training.[27] The subject matter of this type of research is therefore closely linked to the historical development of vocational training; moreover, its establishment as an academic discipline was also connected with the interests of particular occupational classes.

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[23] Cf. Heid, 1993.

[24] See for example Kämäräinen, 1998.

The continuing significance of the guild chambers (*Handwerkskammern*), the trade guilds and the chambers of industry and commerce in the German system of vocational training is one of the symptoms of the great importance attaching to occupational status in German vocational training.

In other countries where vocational training has traditionally played more of a stopgap role alongside general secondary education and further education in technical and scientific disciplines, vocational-training research as such has had a great struggle to establish its legitimacy and suffers from a fragile infrastructure.[28]

German teacher training in the technical and commercial domains is rooted in a long tradition of studying educational philosophy and practice and the more recent tradition of educational research. It has also focused constantly on fundamental issues on the general educational agenda and their implications for technical and commercial

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[25] See for example the contributions to the present volume by Fries-Guggenheim and Patiniotis.

[26] Keiner and Schriewer, 1990

[27] Cf. Deutsche Forschungsgemeinschaft (German Research Society), 1990, Mitter and Lauterbach, 1998, and Georg, 1998.

[28] See for example Patiniotis in this volume.

training.[29] For all the differences that may exist, the basic fact is that the ontological reference value is the individual and the conditions in which his or her personal qualities, whatever form they might take, can develop.[30] Especially since the seventies, studies from the realms of economics and the social sciences have become increasingly relevant to vocational-training research. In this context, we should highlight research into the labour market, occupational research, sociological research into the industrial and social effects of qualifications, research into career patterns and psychological research.[31]

In starkly simplified terms, it could be asserted that French vocational-training research, for example, is far more firmly rooted in the development of the positive empirical sciences than is the case with the German tradition of teacher training. The discussions that have long been conducted in Germany on issues of educational philosophy have no equivalent in France, or at least not as part of a more general discipline.[32] More so than in Germany, the term 'vocational-training research' seems to be used in France to define a common body of subject matter, irrespective of the angle from which it is approached. For that reason, there is scarcely any discussion in France about the value and importance of socio-economic research compared with research into technical and commercial education theory in the context of the vocational-training research category to which both belong. In France, vocational-training research rather seems to merge into socioeconomic research.[33] Research into general education and educational theory, however, largely eclipses vocational-training research, which is symptomatic of the less exalted status enjoyed by the latter.[34]

The same probably applies to the approach to research in other European countries. Certain links that have only recently been explored by the German school of researchers, for example, have already been the subject of vocational-training research in other countries for quite some time. This is the case, for instance, with the link between vocational training and organisational development.[35] In countries where the organisational structure of companies is strongly influenced by occupational demarcation, which acts implicitly as the determinant of future organisational development,[36] such questions, which are answered elsewhere with the aid of organisational theory and research, are a matter for the relevant occupational sciences and for trade-specific educational theory.

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[29] Cf. Stratmann, 1993.

[30] For a critique of this approach, see for example Klaassen, Kraayvanger and Onna, 1992.

[31] Cf. Deutsche Forschungsgemeinschaft, 1990.

[32] Vgl. Schriewer 1983, 361.

[33] Cf. Keiner and Schriewer, 1991. This finding is corroborated by the statements in that work relating to official publications in the domain of vocational-trainng research.

[34] This question of status, however, is not a specifically French problem. The tendency to marginalise research and educational theory relating to vocational training is also observable in the United Kingdom and Germany, albeit to a lesser extent.

The distinction that can be made in German-speaking countries between research in the field of educational theory as it relates to vocational training and research in the social sciences on subjects related to vocational training is almost impossible to extend to international research. Comparative disciplines, which have long been confronted with the problem of different research traditions - comparative education is an example[37] - have been seen from the outset by those who engage in them as multidisciplinary or interdisciplinary fields of research defined by a common body of subject matter.[38] A glance at the academic records and institutional origins of the European vocational-training researchers illustrates this heterogeneity.

In essence three basic strands of vocational-training research are distinguishable in the European context, although there are many areas where they overlap: first of all, there is the research into the system of qualifications which is conducted in the domain of the sociology of labour and industry; secondly, there is the educational and psychological research which focuses particularly on the individual and the conditions governing the teaching and learning processes; lastly, there are labour-market research and occupational research, which are related to the study of politics and economics. In addition, there is the research field of human-resource development, which has been strongly influenced by American researchers. This research has its roots in the theory of human capital which was developed in the United States in the sixties, particularly as a response to the problems of the developing countries.

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[35] Dybowski, Pütz and Rauner, 1995.

[36] Cf. Drexel, 1995.

[37] Compararative education expressly excludes the German problem of distinguishing between education as a subject of scientific study (*Erziehungswissenschaft*) and education in the sense of *Pädagogik*, the practical art taught in universities and colleges of education.

[38] Cf. Epstein, 1994, p. 918.

In the questionnaires that were sent out in the course of 1997, the question regarding the disciplines relevant to vocational-training research elicited the following responses: sociology, education, educational research, political science, labour-market research, social research, technological research, educational economics, economics, philosophy, organisational theory, history and social-policy studies. The diversity of these responses is a reflection of the problems outlined above.

For the aforementioned reasons, it will not be easy to find a common European definition of the subject matter covered by the term 'vocational training' for the foreseeable future. The politics of vocational training and the differing interests of those who have sought to define it are reflected in quite firmly-established institutions. The need for a legal definition of what constitutes vocational training has been met is some respects but remains unsatisfied in others; the answer may lie in a judgement by the European Court of Justice, for example, but the present situation makes the need for such a definition only too clear.[39] Although the dispute about the competence of the European Union in the realm of education and vocational training that raged prior to the preparation and adoption of the Maastricht Treaty has largely been settled, the introduction of Economic and Monetary Union and the inclusion of the employment chapter in the Amsterdam Treaty have thrust the issue of closer agreement on matters relating to vocational training and the labour market back into the spotlight of political and academic interest.

2 *Methodology and research goals*

Besides the different disciplines that relate to this area, vocational training is also researched for different purposes, with the aid of diverse methods.

At a rather abstract level, Nyhan distinguishes the positivist tradition, then – with reference to Gadamer and Habermas – the more hermeneutically-based approaches and finally the tradition of behavioural research.[40] The relative importance of each of these three traditions varies in different research cultures.

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[39] Cf. for example Hörner, 1998.

[40] See Nyhan, pp. 25-26, as well as Mitter and Lauterbach, 1998.

In the Anglo-Saxon tradition, 'policy-evaluation' projects, which are normally sponsored by the Department of Education and Employment, account for the lion's share of vocational-training research. The purpose of these projects is to evaluate current policy initiatives, measures and programmes. In this case, the information sought by the researchers is determined to a great extent by the involvement of the commissioning body and the terms of the commission. The 'standard' methods of quantitative and qualitative social research are applied in these projects.

Within and on the fringes of research into the transition from school to work, which is relevant to vocational-training research and is strongly Anglo-Saxon-dominated, repeated references have been made in recent times to the importance of combining quantitative and qualitative research. To judge by the number of publications on this subject and the research methodology used, this seems to be the furthest-advanced research field in terms of supranational research projects.[41]

In the Federal Republic of Germany there are pilot schemes, so-called 'model experiments', which are sponsored by a joint national/regional body, the *Bund-Länder* Commission for Educational Planning. This programme has been running for almost 25 years. In the discussion that has accompanied the programme, two different underlying philosophies have been distinguished time and again: the first of these sees the pilot schemes as an instrument for improving practice, while the second sees them as a means of acquiring knowledge.[42] The projects based on the first research goal are part of the same tradition as those which the Anglo-Saxon world categorises as 'action research'.

Because of the aforementioned importance that attaches in German-speaking countries to the training of teachers for the more academic subjects, the hermeneutically-based approach plays a greater part there than in other European countries.

Research goals in the field of European vocational training are very closely linked, as a rule, to the process of European unification. The reasons for this lie in the ways in which these projects are funded as well as in the researchers' own commitment.

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[41] Cf. Evans and Heinz, 1993, Bynner and Chisholm, 1998, Schaeper and Zinn, Hillmert and Brown in this volume.

[42] For the most recent example, see Sloane, 1997.

In the context of European vocational-training research, we frequently encounter the question (sometimes implicit and sometimes explicit) whether acceptance of the principle of increasing European integration does not imply the need to replace the traditional comparative form of research into general and vocational education with new approaches.

In its logic, this debate reminds me of the discussion on the relationship between these very disciplines that took place in the fields of *comparative and international research into education theory.*[43] While the defining feature of *comparative* research tends to be an analytical interest in 'putting relationships into relation', i.e. comparing relationships that exist in the context of particular systems with those that exist in other systems,[44] the purpose of *international* (or *internationalist*) research is to acquire rationally-grounded knowledge as a means of promoting mutual understanding and unity between people from different cultural backgrounds.

Both of these goals underlie European vocational-research projects to varying degrees. The aims of the Europrof project,[45] for example, are defined as follows:

"The long-term aim of the project is *to develop a 'community' of VET researchers and practitioners and the 'professionalisation' of VET* [*our italics*], in other words to gain the recognition of VET as a discipline and a profession in its own right. In the shorter term the project aims to build an international network of VET researchers and to develop new qualifications for VET professionals, planners, teachers and trainers, through a European Masters (MA) qualification to be offered in universities in different European countries."[46]

But Hannan, for example, defines the following objective:

"To *analyse in detail the impact of national institutional differences in education/training arrangements* [*our italics*] and in ET and labour market linkages on the nature and success of transitions: issues such as exclusion, extent of level and content congruence ('job matching'), 'qualification inflation', over-qualification etc. The main hypothesis is that substantial interaction effects exist between such national institutional arrangements and the relationships between social origins and education/training outcomes, as well as the relationships between the latter and school-to-work transition processes and outcomes."[47]

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[43] For a general portrayal, see Epstein (1994), Mitter (1993) and Schriewer (1992).

[44] Cf. Schriewer, 1987.

[45] Europrof: New Forms of Education of Professionals in VET.

[46] Cf. http://www.itb.uni-bremen.de/projekte/europrof/default.htm; details of World Wide Web sources were checked for currency at the time of going to print.

In both cases, the defined aims are legitimate goals of supranational research. Each presupposes the other, so the two are interrelated.

If we wish to order supranational research projects by research goal, further categories may be borrowed from the tradition of comparative education:

Hörner distinguishes four functions of comparative research, which derive from the crossing of two pairs of opposites: theoretical and practical interest on the one hand and specificity and universality on the other.[48] This combination produces four different (ideal) types of underlying research goal:

The first type of research goal, rather theoretical in nature and associated with the search for the specific features of a particular social structure, serves what is known as the idiographic purpose of comparative research. The Naya contribution to the present volume could be cited as an example of research designed to perform this function, since its ultimate purpose is to inform the reader of the specific situation in Spain.

A fairly frequent research goal of European projects is 'meliorism' which is a cross between the dimensions of practical interest and specificity. The most obvious example of this type of activity is the so-called 'best-practice' research. Since supranational research work in Europe is closely associated with the political process of European unification, research projects with a 'meliorist' goal are particularly commonplace. However, researchers cannot be warned enough against the simplistic assumption that alien models can easily be adapted into one's own culture.

The almost experimental function created by the combination of the dimensions of theoretical interest and the quest for the universal can be seen in the present publication, for instance in the Vicenik study. This quest for general scientific laws may also be referred to as nomothetic research. The 'close-matching' method represents an attempt to create a quasi-experimental situation in which specific features are observed and compared within identical settings.[49]

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[47] Cf. Hannan in the appendix.

A practical research goal combined with the quest for the universal was termed evolutionary by Hörner. The contribution by Leney and Deluca falls into this category. The objectives of the Cedefop network Ciretoq[50] can also be subsumed under the same heading.

It is not enough merely to illustrate these four categories we have briefly outlined by citing individual projects; in order to demonstrate their analytical value, we should also examine which of these four functions are covered by the existing body of European vocational-training research.

It is noticeable that the idiographic and experimental research goals, i.e. the two types of comparative research that focus on the theoretical dimension, occur least frequently.[51]

The idiographic and experimental functions, however, are important foundation stones in the construction of a reliable system for interpreting the findings of supranational research projects, irrespective of whether the projects primarily involve applied or basic research.

Since Sadler, there have been repeated references by comparative educationalists to the importance of idiographic knowledge as a fundamental prerequisite for the acquisition of comparative data.[52]

When asked about their own methodology, the speakers at the Bonn conference mentioned the following approaches:

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[48] See for example Hörner, 1997, p. 70. This was introduced into the discussion on European vocational-training research by Mitter and Lauterbach. Cf. Tessaring, 1998, p. 205.

[49] Cf. Georg in this volume.

[50] Circle for Research Cooperation on European Trends in Occupations and Qualifications.

[51] See for example the proportions of the budget allocated to Pilot and S&A respectively, COM(97)399.

[52] Cf. Epstein, 1994.

the Delphi method, participatory observation, curricular analysis, close matching, comparative analyses, case studies, secondary analyses, content analyses, interviews, longitudinal analyses and biographical interviews.

These statements about the speakers' own research methods reflect the multidisciplinary nature of their research on the one hand but also the unique line of enquiry that is pursued in the field of comparative vocational-training research.

3 Institutionalisation of vocational-training research in the European Union (EU) and its Member States

Profiles of the vocational-training research institutions in Europe are contained in the list compiled by Blumberger and Reinsprecht (1991).[53] Eighteen such institutions are listed in ten EU Member States, Switzerland, the former Czechoslovakia (CSFR), the former Soviet Union, Hungary and Poland; the details listed are based on information material provided by these institutions and on their responses to questionnaires previously sent to them.

In the annex there is a country-by-country synopsis, giving the legal status of the institution, the name of the body responsible for it, its research priorities and projects and the size of its staff and budget. The Cedefop report on European vocational-training research entitled *Training for a changing society*[54] contains an updated directory of vocational-training research institutions in Europe.

In its series *Educational Research Institutes in Europe*, the official organ of the European Educational Research Association (EERA)[55] publishes three times a year self-portraits of individual research institutes; not all of the institutes, however, conduct research in the field of vocational training.

The Blumberger und Reinsprecht report refers to the difficulty of identifying institutes which either belong primarily to the university or academic sphere or devote a relatively small percentage of their resources to vocational training and related research.

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[53] See Blumberger and Reinsprecht, 1991.

[54] Tessaring, 1998.

[55] *EERA Bulletin*, 1995 et seq.

Anyone who intends to deliver anything approaching a comprehensive report on the research institutions in the Member States will also encounter the problem of different research cultures. Moreover, the dynamics of this field of research make it virtually impossible to present a panoramic snapshot.

In the field of vocational training in particular, it is frequently observable that research projects are not born of an interest in vocational instruction *per se* but of a desire to assess the vocational instruction provided or the relevance of the qualifications awarded in one's own discipline or trade.

In addition, there are a number of more or less 'non-specialised' institutes in which social research is conducted. Most of these are run by private or voluntary bodies. There can be a wide range of motives for engaging in vocational-training research; for example, the fact that such research enjoys a favourable position in the 'market' for research grants, that it is one of the self-imposed aims enshrined in the statutes of the researching body, etc. Each of these details should be seen in the context of specific national conditions governing the conduct of social research in general and of vocational-training research in particular.[56] In quantitative terms, the research institutes are distributed among the Member

States as illustrated in the diagram above. The impression conveyed by this diagram is not entirely accurate, however, which is probably due in large part to inexactitudes in the data input (note, for example the high number of institutions in Belgium, which probably results from an imprecise distinction between executive and funding institutions).

Other key factors in institutionalising and guaranteeing the continuity of research are documentation and information systems, libraries, journals and learned societies.

These are the institutions through which the results of research projects are exchanged and their problems shared and through which interested members of the public are given the opportunity to catch up on and follow the discussions on the subjects to which these projects relate.

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[56] Drexel refers to the same point in this volume.

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This institutional infrastructure is at various stages of development in the individual Member States. For example, France has the Centre Inffo[57] and Britain has Education Online. The main function of these services is to enable interested parties to search online for unpublished literature such as conference papers by bibliographical criteria, for instance, and download them electronically.

Closely linked to these systems is the British Education Index, a bibliography on issues of education theory and policy, which is available on a commercial basis in electronic or printed form. There is also a special sub-database devoted to vocational education and training, which can be browsed online free of charge.[58]

In the Federal Republic of Germany, information on literature in the field of vocational-training research is provided through the Federal Institute for Vocational Training (BIBB) in the form of the *Literaturdokumentation Berufliche Bildung* service, which also operates the electronic literature database *Fachinformationssystem (FIS) Bildung* (Specialised Information Service on Education).[59] *FIS Bildung* enables researchers to investigate every aspect of education theory and is regularly supplied with bibliographical material by 27 institutes in the German-speaking countries.

Learned societies which deal entirely or partly with questions of vocational-training research exist in many Member States of the EU. Examples of these are the British Educational Research Association or the Dutch Educational Research Association (DERA). In Germany, there are the highly academically-orientated *Kommission für Berufs- und Wirtschaftspädagogik* (Commission on Vocational and Economic Education) of the *Deutsche Gesellschaft für Erziehungswissenschaft* (German Educational Research Society) and the contrasting *Arbeitsgemeinschaft Berugsbildungsforschungsnetz* (Vocational Training Research Network Association), which operates as an interface between the political, scientific and practical aspects of vocational-training research.

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[57] http://www.centre-inffo.fr/

[58] http://www.leeds.ac.uk/bei/vetbib.htm

[59] Updates to the CD can be accessed via the German Institute for International Educational Research (DIPF) homepage the database *FIS Bildung* is also produced by the DIPF http://www. dipf.de.

Since it was founded in 1975, one of the tasks entrusted to Cedefop by virtue of a Council Regulation has been to contribute to the co-ordination of vocational-training research at the European level.[60] Cedefop, however, does not see itself as a European vocational-training research institute, even though it has, since its creation and to the present day, conducted numerous comparative studies on systems and aspects of vocational training and further education which can be classed as vocational-training research. Recently, however, Cedefop seems to have been placing greater emphasis on vocational-training research as well as on its general efforts in the realm of information and documentation. The Centre makes a major contribution to the promotion of European vocational-training research. *Vocational Training*, the magazine published by Cedefop, is an important forum for researchers in the field. As a body that is closely linked to the European Commission, it operates at the interface between science, politics and practice. In co-operation with the Statistical Office of the European Community (Eurostat) and under the political authority of the European Commission, Cedefop also performs important groundwork to make the European systems of education and vocational training statistically comparable.[61]

In recent times, academic networks have been created in the domain of vocational training, such as the FORUM, supported by the Directorate-General for Science, Research and Development (DG XII) of the European Commission, and *Vetnet*, affiliated to the EERA, which discuss and exchange information on research ventures and findings in the realm of European vocational-training research (cf. Manfred Tessaring, *Cedefop European Research Report*) and try to create a permanent framework of information and contacts for vocational-training researchers in Europe.

In addition, there is a network of vocational-training research institutes of the EU Member States, known as the Consortium of Institutions for Development and Research in Education in Europe (CIDREE). Most of the institutions in this network operate in the realm of school development. CIDREE has a total of 21 member institutions from 16 countries.

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[60] See the Regulation of February 1975 establishing Cedefop.

[61] Cf. Knauth in the present volume.

Much of the vocational-training research conducted at the European level takes the form of study and analysis projects under the Leonardo da Vinci programme or consists in the scientific monitoring of pilot projects.[62] Education and vocational training are one of the priority areas for socio-economic research under the fourth framework programme for research and technological development.[63]

Research on an European scale is thus receiving increasing support from the European Union. While the Leonardo da Vinci programme, with a budget of ECU 620 million over a four-year term from 1995 to 1999, explicitly serves to promote vocational training, i.e. not only vocational-training research but also large-scale exchange programmes and pilot schemes, other EU programmes also allow scope for the promotion of projects that are relevant to vocational training; these include the educational programme Socrates (850 million ecus) and Youth for Europe (126 million ecus). These programmes are currently being renewed and are to be continued with new priorities from the year 2000. Whether and to what extent provision will be made for vocational-training research in the revised programmes remains uncertain. It appears that Cedefop is to be entrusted with the lion's share of responsibility for this task.

The Directorate-General for Employment, Industrial Relations and Social Affairs (DG V) of the European Commission also supports study and development projects relating to vocational training under various subprograms such as Adapt, Youth Start, etc.

Down through the history of the former EEC, EC and now EU support programmes, from PETRA, FORCE, Comett, Eurotecnet, Erasmus and Tempus to the new Leonardo II programme that is currently under discussion and the fifth framework programme for research and technological development, a type of Scientific Community has developed in the realm of vocational-training research and seems to be establishing itself as a permanent factor. This manifests itself, for example, in a number of networks, some of which are themselves assisted under relevant support programmes.

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[62] See for example Kuda and Strauss in the present volume.

[63] Cf. Michael Kuhn and Hilary Steedman as well as the annexed contributions from the Targeted Socioeconomic Research (TSER) programme.

In this context too, a distinction can be made between networks which deal primarily with the subject of vocational training and others which, because of the field in which they operate, are also relevant to vocational-training research. It is also possible to distinguish between networks that serve first and foremost as a forum of academic communication and those intended mainly for vocational-training professionals, in which the academic side of the subject plays only a minor or is included for advisory reasons.

One of the first European networks in the field of vocational-training research was the Ciretoq network, which is run by Cedefop. One of its functions is to collate research findings and studies from the Member States which relate to trends in occupations and qualifications, to identify and define new research issues and to advise policymakers and professionals in the field of vocational training. The members of the Ciretoq network try to identify current trends in these areas of the vocational-training policies of the countries in the European Economic Area and the applicant countries for EU membership in Central and Eastern Europe.[64]

A meeting of scientists from Scotland, the Netherlands and Germany which was held in Edinburgh in 1993 resulted in a feasibility study on the creation of a network under the EU support policy for European Co-operation On Scientific and Technical research (COST).[65] Since 1997, this network has been supported under the COST programme and will continue to receive such support until 1902. Within the network there are five sub-networks, each of which is devoted to a specific dimension of the vocational-training system:

- context and input,
- processes,
- complex teaching and learning arrangements/environments,
- initial conditions, and,

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[64] See CEDEFOP (ed.), *European Trends in Occupations and Qualifications*, 3 volumes (publication pending)

[65] COST, *COST Action A 11. Flexibility, transferability, mobility as targets of vocational education and training.*

- output evaluation and assessment.

The aforementioned FORUM network was created in 1995 by vocational-training researchers from various Member States, and since 1998 it has been supported under the TSER programme of DG XII as a thematic network. FORUM operates through regular workshops and divides its field of interest into five subtopics:

- VET culture, value and meanings,
- VET and the labour market,
- VET institutions,
- VET and occupational identities, and,
- VET and learning organisations.

The researchers in the FORUM network meet three times a year to exchange information and ideas on particular specialised subjects.

Vetnet, which was also referred to above, is the network for vocational-training researchers within the EERA and is one of 12 sub-networks which the association now administers. Vetnet is currently planning the publication of an electronic journal. Reports on the annual conferences are distributed to members. The first half-yearly interim conference is now being planned. In addition, a sort of Internet guide to vocational-training research is being compiled, containing up-to-date details of conferences, research findings, support programmes and so on.

Euronet Work and Education is an association of research institutes, financed by membership subscriptions, which are committed to applied social research in the domain of vocational training and work organisation.

The Vocational Education and Culture network studies the specific ways in which national systems of vocational education are embedded in national educational history and cultural tradition.

Another fairly specialised thematic network is the Work-process-knowledge Network. This network is also supported under the TSER programme.

One academic network that is relevant to vocational-training research, though not actually designed for that specific purpose, is the Transition Network, which is an exchange platform for researchers dealing with problems relating to the transition from school to the world of work. The researchers who belong to this network are mostly sociologists. Until 1997, the network was funded by the European Science Foundation in Strasbourg.

The EGRIS network, based in Tübingen, is also of secondary relevance to the field of vocational-training research. Its purpose, in brief terms, is to promote the specialised discussion of social exclusion.

Besides these academic networks there are other networks, such as the ERD network administered by Cedefop, from which we obtained some of the information on which the present study is based, and another Cedefop network, TT-Net (Teacher/Trainer Network), which is dedicated to specialised exchanges on the training of instructors in diverse national contexts. In connection with this network we are also seeing the emergence of national communities. The philosophy behind this network differs from those listed above in that it seeks to focus on communication between researchers, professionals and decision-makers with a view to reaching the practitioners, namely vocational instructors and those who train them. The aforementioned Europrof network is closely linked with TT-Net; if it can be developed as part of the next generation of the latter network, Europrof will probably continue to receive support under the Leonardo da Vinci programme after the expiry of the present support period.

The following table provides a overview of the existing academic networks which are relevant to vocational-training research. The details in the table are taken from the information provided by the networks about themselves.

Name	Institution/Person	Thematic field	Membership	Information and communication	Support	Publications	Activity types
Ciretoq	Cedefop Burkhart Sellin et al	Identifying trends in occupations and qualifications	European	[illegible]	Within the Cedefop work programme	Book scheduled to appear at the start of 1999	Brains trusts, forecasting
EGRIS	IRIS e.V., Tubingen Andreas Walther	Research done by EGRIS is focused on the changing structures of these transitions: lifelong learning, the gender balance, the emergence of new cultural styles, new forms of work, and change and continuity in family orientations	Multinational	[illegible]	No external support initially; is now supported as a TSER thematic network		
Forum	ITB Michael Kuhn	Comparative framework shifting into the direction of a transnational multicultural approach	European	Discussion group on the Bremen server [illegible]	TSER thematic network		Collaboration, policy orientated research
Transition Network	University of Edinburgh David Raffe	Transition from school to work	European	Homepage, mailing list	European Science Foundation until 1997, now self supporting(?)	Newsletter	Academic discussion
Vetcult VET and Culture	University of Tampere Anja Heikkinen	In the quest for an educational contribution to European vocational training, a joint research effort is needed. This would mean moving away from insular research models and nationally restricted comparisons towards a reflective dialogue on cultural characteristics of vocational education, a dialogue that would take account of the differences in academic traditions	European	Video conference [illegible]			Academic discussion
Vetnet	University of Twente Martin Mulder	Vocational-training research by researchers belonging to the EERA	European	www.[illegible]	As an EERA sub-network receives support from various sources	Electronic journal at the planning stage	Academic discussion
Euronet Work and Education	SFS Dortmund Wilfried Kruse			[illegible] index.htm	No data available	Newsletter	Academic discussion, policy orientated
COST Network	No data available	No data available	No data available	No data available	No data available	Feasibility study published in 1998	Academic discussion

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Besides these networks which define themselves as such and are largely funded as such, there are naturally other less formal encounters between researchers from various European countries which occur at more or less regular intervals.[66] It was also evident from the questionnaires that fairly regular contacts have been maintained and still are maintained between many individuals and institutions, sometimes for the purpose of undertaking additional research projects. In other words, supranational research projects are themselves akin to networks in that they present opportunities to establish and maintain contacts and exchanges between specialists.

The importance of other international networks such as the International Vocational Education and Training Association (IVETA) and the International Technology Education Association (ITEA) in terms of their impact on European vocational-training research, like that of the international organisations in the realm of comparative educational research, for example the World Council of Comparative Education Societies (WCCES) or the International Association for Educational Achievement (IEA), still needs to be examined.

As for information systems which can provide a review of current research projects in the field of vocational training, there are, to our knowledge, three relevant systems offering information from all over Europe: the European Research Directory (ERD), under the direction of Cedefop, the European Documentation and Information System for Education (EUDISED) database, initiated and supported by the Council of Europe,[67] and the Community Research and Development Information Service (CORDIS),[68] which includes a database providing details of EU research and development programmes, although it currently lists only the projects adopted under the fourth framework programme referred to above.

A country-by-country search was carried out with the aid of the ERD. The results are presented in the diagram below.

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[66] See for example Geissler, 1992.

[67] Cf. Vorbeck 1995 and 1997.

[68] Bei allen Datenbanken ist eine on-line Recherche über folgende homepages möglich: CORDIS: http:// www.cordis.lu; ERD: http:// www.trainingvillage.gr und EUDISED: http:// www.bdp.it.

This statistical summary, however, carries limited weight, since the data might well reflect factors such as the 'enthusiasm' of national contributors or a narrow or broad interpretation of criteria in particular countries.

On the whole, it may be said that these databases for vocational-training researchers are an interesting means of obtaining initial access to material on particular subjects and of keeping abreast of current projects. For the time being, however, their content is unable to satisfy more sophisticated requirements. The value of these information systems lies primarily in their ability to offer some initial insight into the research scene for a wide range of users with little prior knowledge. The introduction of more precise descriptors and further search options for the more informed user might make these databases more useful.

With regard to the use of new media to promote understanding and communication between players in the field of European vocational-training research, two recent initiatives should not go unmentioned. Since the summer of 1998, Cedefop has been offering the facility known as the Electronic Training Village, which makes full use of the scope offered by the World Wide Web at the present time.[69] A number of European vocational-training researchers launched another initiative which has resulted in the availability of a communication server based at the University of Bangor in Wales and supported by the European Commission. This server offers users the opportunity to take part in various discussion groups. Researchers may also request their own exclusive forums for supranational research projects.[70]

Outlook

A more detailed analysis of research activity in the field of vocational training with reference to the process of European unification remains a desirable goal for each of the Member States in the context of their respective priorities. The documentation of this subject area is extremely important if transparency is to be established in the domain of European vocational-training research.

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[69] www.trainingvillage.gr

[70] Further information from Graham Attwell: attwell@uni-bremen.de.

Not least as a result of European research in the field of vocational training, there is now a considerable fund of both explicit and implicit knowledge of supranational research and research co-operation (this includes not only knowledge of the various research subjects but also familiarity with the co-operative process itself). This knowledge, however, has hardly been documented in any detail or in a comparative form. This deficit will not encourage the development of discipline-like structures in the field of European vocational-training research, since the failure to disseminate hard-won knowledge to a broad target population will often result in a succession of other researchers having to set off in quest of the same knowledge. Studies in a particular field should not only contain an inventory of previous research findings on the subject in question but should also explain those findings with reference to their discovery and their function in relation to other aspects of the research field.

Likewise, consideration ought to be given to neater dovetailing of national research and European research in the field of vocational training, so as to avoid a situation in which each research system operates in isolation. Vocational-training research bodies in the Member States could, for example, enjoy the huge advantages that result from the use of external assessors (in this case experts from other national research traditions).[71]

The importance of electronic information systems, the Internet and other modern communication media is often underestimated by researchers, in our opinion. Where the researchers are already involved in the structures and subject areas of the discussion, of course, there will not always be anything to gain from the use of such facilities. These media do, however, represent an important window on the world and thereby help to create the necessary openness.

Nor should anyone underestimate the usefulness of the existing electronic networks in supranational co-operation.

The aim must be to achieve understanding on quality standards, methods and objectives of research at the European level. The first steps in this direction have been taken.[72] This field, which has traditionally been regarded as the preserve of basic research, could also be fertile ground for applied research too. It has scarcely featured to date in the support policies of the EU. Existing imbalances in terms of its development as a discipline in the various Member States have been untouched by European policy. Moreover, if research is too closely bound to predetermined and perhaps short-term interests, this will impair its function as a 'social corrective'.

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[71] For an example of this, see Klaasen, Kraayvanger and Onna, 1992.

This discussion, then, should not only be conducted in academic circles or in theoretical terms; it must also figure on the political agenda.[73]

Given the rather large number of networks on vocational-training research that now exist (see above), we shall presumably witness a process in which networks develop their own specific profiles. What the outcome of this process will be, however, remains uncertain for the time being. Perhaps as the process unfolds and structures develop it will be able to break down conventional divisions, such as those between applied and basic research or between so-called qualitative and quantitative research.

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[72] See Dietzen and Kuhn, 1998, and Tessaring, 1998, in the present volume.

[73] Cf. Dietzen and Sellin, 1998.

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3 VET Researchers and Research Institutions in Central and Eastern European Countries[74]

Mihály Csákó[75]

This contribution intends to identify and assess VET research institutions in the partner countries in the perspective of an international network of these institutions. The idea of such a network has been part of the ETF's Work Programme 1997. The new network can be considered a useful instrument for fulfilling the mission of the ETF, particularly disseminating the best results of VET reforms and promoting mutual advice from and to partner countries. Non-systematic observation of VET research in CEEC's and the CIS found an unequal level of research activity in these countries which particularly stresses the need of a research network. Identifying and assessing VET research institutions has been planned and carried out in view of validating the non-systematic experience and assumptions by empirically exploring the following dimensions:

- the current extent and nature of the research activity;
- the institutions operating in the field of VET research;
- researchers (individual and employed in VET research institutions);
- technical and organisational conditions of research work.

1. Recent and current research projects

An ETF intern document cite National Observatories[76] stressing the necessity of research and complaining about non-existing research" in literally all of their reports sent to the ETF. Paradoxically, the data collected by the contributors to a recent discussion paper (pre-selected often by the same observatories) do not support these complaints. Without being exhaustive, the data show rather that a great number of research projects has been carried out in the field of vocational education and training, though their distribution is very uneven in the partner countries (see Table 1 at the end of the paper). In 4 countries at least (the Czech Republic, Hungary, Romania and Bulgaria), the number of VET research projects having been carried out since 1992 by research institutions and individual researchers went over thirty (34 to 54), in 7 countries it falls between 10 and 30, and only in 2 or 3 countries remains under 10 projects.[77]

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[74] The contribution is based on a discussion paper prepared by the author under the contract No. ETF/97/AD/0047 to the European Training Foundation.

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Eötvös Loránd University, Budapest

[76] A network of National Observatories of VET development and policy has been started by the ETF in the Phare and Tacis partner countries, in 1995

The difference between these data and the National Observatories' complaints is however too large to let us continue without trying to formulate tentative explanations to it. In an approach which can be labelled "rationalistic cognitive", we assume that sources of former documents and our respondents use different conceptualisation of the terms "research" and "research project". As the use of the term "project" has become far too common all around the world, it may be an easy solution to our problem to suppose that some contributors distinguished development projects (e.g. curriculum development) and research project differently from others. In an approach based in social psychology and organisational sociology we may suppose that National Observatories reporting to the ETF found themselves in a different situation than the contributors of this paper did, so they might interpret differently the same questions, follow different goals in their *reaction*, and also give different *information*.

If our data do not allow us for the time being to assess the amount of VET research work having been or being done in the Partner States, they still allow to conclude that there *are large differences* both in the concepts of research and the extent of VET research itself.

The scope of research activity can be measured on a nominal scale of research subjects from methodology of teaching and training to macro-economic and macro-social aspects of VET reform. The national contributors of the ETF discussion paper offer some (non systematic) insight to the nature of the research projects carried out in their countries. If we follow the tradition of distinguishing (1) theoretical (or rather basic) research, (2) applied research and (3) development projects, a large part of reported VET research is closer to development projects than to basic research projects. Curriculum development, definition of skill requirements, restructuring training programmes into modular pattern, development of evaluation criteria can be classified into this category. Although some ETF documents also stress the importance of "theoretical research", there are very few cases which can be in good faith subsumed under this heading. Our data do not allow to compare the number of development projects and applied research projects (labour market forecasts; carrier orientation; school-to-work transition etc.), they can be very close to each other.

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[77] We do not yet have this kind of information on Latvia and Slovakia, and only partially on Poland, which can alter the picture. The number of research projects cannot be used as an index of some kind of development level in itself either, as many other (e.g. demographic) factors affect it.

On the other hand, these categories of research projects show an uneven distribution by countries. Hypothetically we can describe four groups of countries - a Central European group, the Balkan States, the Baltic States and the CIS (out of which Bielarus, Russia, Moldova and Ukraine is covered to some extent in this paper) - characterised by different types of projects. (Table 2) Economics centred VET research seems to be well rooted in Central European countries only, while applied educational research projects occur as often in the Baltics and the CIS as in Central Europe.

Differences in the subject and the type of research may be affected by the differences in commissioners and funding. Only Central European states look strong enough to launch research programmes in larger number on their own basis. The most important projects reported in the Balkan and Baltic States are mainly financed (or co-financed) by European institutions or by various institutions of Western European countries. Without being able to identify clear cut categories of countries in this respect, data suggest that the more advanced is a country in the transition to market economy, the greater is the importance of the economic and social aspects in the VET research.

At this point we gain a new insight to the problem of National Observatories complaints about the weakness of VET research and a more vivid image painted by our contributors. In most of the partner countries there can be some researchers, even some institutions working on the field, but their level of institutionalisation can be seen hopelessly low by those who make constant efforts to promote VET reform. Who are doing VET research in Central and Eastern European countries?

2. *Institutions in the field of VET research*

This high level of research activity is attained in a relatively less institutionalised setting. In this respect, the partner countries took over the heritage of the former communist regime. Without being enchanted by names we can state that only three countries have established an institution called *research* institute in the field of VET: the communist Czechoslovakia (1950)[78], Lithuania and Ukraine (both in 1993). Governmental institutions developing and supervising VET programmes without expressed research functions are more widespread: such institutions can be found in seven countries, at least.

These institutions take part in VET research activity at very different level by countries. Among staff members, researchers are affiliated to these institutions everywhere, while the institutions have different tasks to fulfil. The concept they formed on "research" does not seem to depend either on their name or activity. Cultural background of this fact falls beyond the scope of this paper. The important point is that these institutes seem to be able to carry out applied research and development projects (in curriculum development, assessment, evaluation, monitoring, definition of requirements by skills etc.), less ready to analyse the relationship between VET and labour market and even less fit to do theoretical research of larger socio-economic context of VET.

The list of international commissioners, sponsors and co-operating institutions suggests that bearing the name "VET Institute", with or without mentioning "research" as adjective in it, has the great advantage of raising the external expectation that the institute fulfils VET research tasks, at least as main contractor. This expectation seems to work as a "self-fulfilling prophecy".

In some countries, educational research institutes host VET research in the form of a department or research unit. This arrangement also reveals an outdated privileged link of VET to education, going pair with its separation from economy. In this tradition, educational institutes could grow very big (as the example of one in a former Soviet State, reporting 158 research fellows, shows), while only a handful of them work in the field of VET research. On the other hand, there are complaining (*e.g.* in Russia) about the collapse of a research network of well-trained and qualified researchers[79], even if a central VET institute has been restored. As a "participant observer" of the transition process in a former communist country, I can confirm that preserving this kind of scientific values does not have a high ranking among the nineties' priorities. It is still true however that if educational institutes are able to attract and involve open-minded researchers, sensitive to the changing economic and social needs VET should cover, they will be able to fulfil the tasks of a VET research institute.

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[78] This study is not intended to explore whether it fulfilled this mission or not under the communist regime. One can think that VET institutes established in the former communist countries differed from each other in their name only, and they did function very similarly, independently of being called "research institute" or simply "institute".

In some countries, labour research institutes are the main institutional actors in VET research. They have to face the same challenges from the opposite side and the key is again in the quality of the researchers they engage and the pattern they follow in research strategy.

It is clear that every institution, which is worth to be mentioned, has eminent role in shaping the nation's VET strategy through various channels. They all carry out research projects commended by governmental agencies, their directors and senior fellows take part of national (ministerial etc.) advisory bodies or bi- and tripartite bodies concerning VET, public and/or higher education, economic issues, industrial relations etc. Among all these types of institutions, university institutes and some academic or independent research institutes seem to be the closest to the "ideal type" of a VET research institute.

VET research seems to be organised following two patterns: either (1) within (or at least not very far beyond) the framework of a strong central VET institute; or (2) through a more or less loose network of researchers and research institutions. No clear categorisation of institutions can be made, however. While central VET institutes seem to show some advantages compared to "loose network" pattern, the consequences of the patterns on research activity also need further studies.

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[79] Because of the rising costs of the projects and lack of systematic funding", as a Russian VET expert explained.

3. *The role of the researchers*

The number of researchers working on VET projects is not easy to be established. There are much more researchers reportedly participating in the projects than employed by the institutions. This fact can be interpreted as a sign of large surveys as well as that of an extended subcontracting activity of administrative centres. Again, we are still far from knowing the way VET research is done in these countries, but the importance of the human factor is getting reinforced.

Most of the researchers active in VET research projects are employed in research institutions which can be considered VET research institutes, independently of their name and other research priorities. Again in this respect, there are big differences by countries. Large research institutes almost monopolise VET research in some countries, while in others the work of several institutes is still complemented by significant individual researchers' activity.

The line between the categories of researchers affiliated to VET research institutions and individual VET researchers remains blurred. The big difference between the number of employed researchers and that of those working in research projects supports the assumption that in transitory conditions, with restructuring institutional system, there are far too many factors to keep even prominent VET researchers outside VET research institutions (reorganisation and drastic reduction of the number of researchers are not the minor among them). The same conclusion is offered by the list of individual researchers and also by the large variety of institutions running a VET research team/unit or having among their research fellows some VET researchers. The situation is however so complex that one can see even directors and senior researchers of VET institutions running privately at the same time![80]

Researchers are rather well qualified. The exceptions of some particularly big institutions do not alter the fact that roughly 1/5 of all those reported on by national contributors to the ETF discussion paper have Ph.D. or higher scientific degree (see Column 4 of Table 1)[81]. It is normal to find higher qualifications at the individual researchers than within VET research institutions since individuals are mentioned because of their particular merits.

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[80] I admit that this information *can* result out of a communication error, but I underline that it also can happen *in the reality* of our transitory societies.

[81] *I.e.* at least 90-110 Ph.D. degree holder out of 480-500 researchers.

Most of them have several times participated and presented papers at international conferences, workshops, *colloqia*, many of them as guest speakers[82]. In this respect very little differences seem to be between the countries and the institutions.

There are more variety in mastering foreign languages (see Column 7 of Table 1). The average level is promising for an international research network, but it covers the differences of those who master three or four languages and those who speak or understand none. Almost 500 researcher speaks altogether approximately 300 foreign languages. Not surprisingly English is the most frequently spoken of them (1/3). Taking into consideration the history of these countries, the frequency of Russian can be considered rather low (1/6)[83].

Two factors which affect the frequency of proficiency in foreign languages in the scope of our investigation should be pointed out. One of them refers to numbers. It is quite obvious that the smaller is the VET research community in a country, the larger number of second and third languages can be expected to occur. Secondly, where VET research is linked up to real research institutions (i.e. to university institutes or smaller research units of the Academy of Sciences), higher will be the number of researchers speaking foreign languages.

Although incomplete and not very reliable, the information collected on second language proficiency is still reassuring: no language barriers will hinder co-operation in a future VET research network. In Figure 1 an index of foreign languages is used to express the human factor of preparedness for international co-operation.

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[82] The way of responding to these questions of the ETF questionnaire allows however some doubts about the clear distinction of a guest speaker and a simple contributor.

[83] For our purposes languages very close to the subjects native language (like in the case of most slavic languages) have been however taken into consideration as real communication tools in an international framework of the partner countries.

4. *Working conditions*

Technical conditions are also necessary to co-operation in a research network. The basic necessity is communication. In this study telephone, fax and e-mail access in VET research institutions has been taken as indices and explored (see Table 3) in three dimensions:

(1) the extension of access to all, some or none of the VET researchers,

(2) the unlimited or limited nature of the access (in time/in number/in costs),

(3) and the direct or indirect way of access, *i.e.* depending on the end-user only or also on higher level permission.

Collected commentaries show that the first of the dimensions is considered technical, the second mainly economic, and the third one organisational.

When the technological tool is present, access is available for all of the researchers. Telephone access is the most widely assured, a fax machine is still less available. There are institutions - mainly in CIS - entirely without e-mail access.

On the other hand, e-mail is a "more democratic" tool of communication than traditional telephones and fax. In cases where only limited and controlled (indirect) access is given to telephones and faxes, e-mail (if available at all) offer a free opportunity.

To have e-mail access, one need first a computer and for an unlimited, direct access one need a real personal computer. PCs form the same kind of organisational reaction as e-mail does: when they exist they are easily accessible, facilitating e-mail access as well.

In view of building an international network we should take into consideration that the partner countries are situated on a "social and economic slope" from Western heights to Eastern lows. Material needs (measured here on computer availability) are bigger in the CIS than in Central Europe. In Belarus, VET researchers in the Institute of Educational Research have no access to computer and e-mail at all. The material shortage is not alleviated by less formal limitation, it goes rather in pair with the social phenomena of limited access.

These conditions can shape a particular system of communication with unequal speed by directions in the same channel.

Comparing human conditions to technical conditions of international co-operation in VET research, we see that the human factor can be very strong in some countries while technical conditions are modest (see Table 1).[84] As a national contributor pointed it out: *"Answers on questionnaire's questions in this cluster may give perhaps not a very optimistic picture but the institution has a practical capacity to engage in international co-operation."*

Even hindered by material shortage, the human factor can play a leading role in the reform process; it is much easier to change technical conditions than produce new skills or even new attitudes. Conditions for a VET research network in the Phare and Tacis partner countries can be seen with optimism (see Figure 2), if funding for material assistance will follow a political decision of its establishing. Additional European funding is also made necessary by the fact that VET research is organisationally scattered and international communication is not budgeted at the research units, except in very rare cases.

Conclusions

Out of a preliminary analysis of national as well as European documents we concluded that

- a Central and Eastern European VET research network would serve the goals defined by the EU Council Regulation by promoting VET reform in the partner countries through contributing to

- the development of VET research in the CEECs and the CIS;

- sharing and exchanging VET research experience;

- identifying VET research problems and discussing methodology of their study;

- international co-operation in comparative research projects;

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- assuring direct relation both between researchers of different countries as well as between them and European institutions.

- VET researchers and representatives of VET institutions of the Partner States have in fact strongly expressed their need and motivation to establish such a network;

- organisational, human and material preconditions of a VET research network are given in the partner countries, although very unevenly (in the form of institutions close both to high level decision-making and to field research as well as of qualified researchers with some experience in international co-operation)

Data collected for a discussion paper commissioned by the ETF have given broader insight to the state of art in VERT research in the CEECs which can be summarised as follows:

- Without being able to identify clear cut categories of countries in respect of their VET research activity, analyses suggest that the more advanced is a country in the transition to market economy, the greater is the importance of the economic and social aspects in the VET research.

- VET research shared the fate of VET in general amidst the turbulent changes of the transition: many institutions have not survived, others have been reorganised, splitted into parts or re-merged into new organisational structures. VET research has no uniform institutional structure throughout CEECs and the CIS. Central VET institutes seem however serving as *foci* of crystallisation of research efforts where they exist.

- Individual researchers should be taken into consideration mainly because of the transitory nature of institutional settings, but also because VET research can be carried out in many different organisations, not necessarily entitled to do research in this field. Both those employed in VET institutions and individual researchers are of high quality by standards of scientific degrees, mastering foreign languages and having got into contact with international research activity.

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[84] In this respect Moldavia resembles to the Balkan States.

- Working conditions show the greatest variety. VET research institutions are very unevenly equipped by countries. Financial shortage and in some countries organisational limitations also hinder access to modern communication.

Analysis supports the hypothesis that VET research institutions in CEE countries are able and ready to co-operate in European framework but need the help of European institutions and colleagues in various fields and various degree.

Table 1

Summary of indices of vet research in central and eastern european countries

Country	(1)* # VET Res.Inst	(2) Is there a VET Inst?	(3) # Total Res-rs	(4) # Res-rs with degree	(5) # Total Res.Proj	(6) # Internatl Res.Proj	(7) Index of intl comm facility	(8) Foreign langu-s/ /res-rs	(9) Funding for intl cooperation	(10) Aggreg. index for intl co-op.	(11) Aggr.ind. as % of average
CZ	1	yes	58	6	43	11	19	10	yes	35	152
H	3	yes	24	4	54	19	18	18	no	37	161
PL	4	no	28	8	**	2	15	10	**	25	*109*
SK	1	yes	7	5	16	4	14	20	yes	37	161
SLO	2	yes	11	7	11	4	16	13	yes	35	*152*
RO	2	no	23	2	34	16	12	20	yes	38	165
BG	1	no	21*****	3	45	5	10	15	no	28	122
MA	2	no	10	6	15	**	12	**	**	12	*52*
ALB	1	no	24	8	7	7	8	28	no	37	*161*
EE	0	no	7	6	15	**	**	**	**	**	**
LT	2	yes	12	5	24	12	10	20	no	31	135
LV	3	yes	**	**	**	**	**	**	**	**	**
BEL	1	yes	158	**	10	2	2	**	no	3	*13*
MLD	1	no	9	5	12	3	2	15	**	20	*87*
RUS	5	yes	65	21	52	11	21	4	y/n	31	135
UKR	2	yes	50	17	8	1	6	3	no	10	43
TOTAL***	31	10****	486	103	346	97	12	7	5****	23	

Headings: (1) Reported as VET research Institution; (2) Named VET Institute; (3) Affiliated + individual; (4) Ph.D. etc. (5) Research projects mentioned in questionnaires; (6) Reported as such; (7) Based on access to phone+fax+email+computer; (8) 10*rounded average number of languages spoken; (9) Funding for international communication or travelling, at the VET research unit's disposal; (10) Based on columns 6, 7, 8, 9. ** Missing or very incomplete data., *** May diverge from the sum or average of the column if non-numeric information suggested it. **** Only "yes" summed up. ***** Between 1992-1995. Since 1997, there are only 4 researchers in VET field.

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Table 2

(A) fields and nature of reported institutional activity by region

		Fields of subjects			Nature of the projects		
		Soc	Educ	Econ	Theor	Appl	Dev.
Region	CE	5	21	9	15	14	6
	Balk	2	15	0	3	6	8
	Balt		3				3
	NIS	1	22	2	2	7	16

(B) individual researchers' projects by discipline, nature and region

Individual		Nature of the project			By regions		
Res.projects		Theoret-l	Applied	Developm.	C.Eur.	Balkan	Baltic
Discipline	Socio	1	1		1		
	Educ	1	8	5	3	6	3
	Econ	4	2		5		

Table 3

Working conditions by countries and institutions

Country	Phone			Fax						Computers		
	Ext	L/un	D/in	Ext	L/un	D/in	Ext	L/un	D/in	Ext	L/un	D/in
CZ	some	Lim	Dir	all	Lim	Dir	all	unl	Dir	all	unl	Dir
H	all	Lim	Dir	all	Lim	Dir	some	Lim	ind	all	unl	Dir
	all	Lim	Dir	all	Lim	Dir	all	unl	Dir	all	unl	Dir
	all	Lim	Dir	all	Lim	Dir	all	unl	Dir	all	unl	Dir
PL												
	all	Lim	Dir	all	Lim	Dir	none	x	x	all	Lim	ind
	all	Lim	Dir	all	Lim	Dir	all	unl	Dir	all	unl	Dir
SK	all	unl	Dir	all	unl	ind	none	x	x	all	Lim	Dir
SLO		unl	ind	all		ind	all	unl	ind	all	unl	ind
	all	unl	ind	all	unl	ind	all	unl	Dir	all	unl	Dir
ALB	all	Lim		all	Lim		all	Lim		all	Lim	
BG	some	Lim	Dir	all	Lim	ind	none			some	unl	Dir
MA												
RO	all	Lim	ind	all	Lim	ind	all	Lim	ind	all	unl	Dir
	all	Lim	ind	all	Lim	ind	all	Lim	ind	all	unl	Dir
EE												
LT												
LV	some	Lim	ind	s	Lim	ind	all	unl	Dir	some	Lim	Dir
BEL	all	Lim		s	Lim		none			none		
MLD	all	Lim		none			none			none		
RUS	all	Lim	Dir	all	Lim	Dir	some	unl	Dir	all	unl	Dir
UKR	some	Lim	ind	s	Lim	ind	none			some	unl	Dir
	some	Lim	ind	s	Lim	ind	none			some	unl	Dir

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4 Instruments of Comparative Statistics for Areas of Interest of the European Union

Bettina Knauth[85]

Introduction

Eurostat is using a variety of data sources in order to produce internationally comparable statistics on the various aspects of vocational education and training. It is the primary aim of this presentation to give a brief overview of the methodology of the three main instruments of comparative statistics on vocational education and training that are currently being used in Eurostat, to illustrate their usage by some examples of policy-oriented indicators and to point out the foreseeable future developments concerning these three instruments. These sources will be presented in historical order. Finally, the processes involved in producing comparable statistics in Eurostat will be outlined in order to give some insight into the current ways of working of Eurostat.

1. *The European Labour Force Survey (LFS)*

The European Labour Force Survey (LFS) is a household survey with a strong emphasis on variables related to the individual. These variables, though focusing on labour market characteristics linked to employment, unemployment and economic activity in general also include the main personal characteristics of the interviewees (age, sex, marital status, nationality) and additionally two sets of questions relating to the area of education and training. One concerns the educational attainment of the interviewees and the other one their recent or current participation in education and training. By virtue of the combination of all these variables, the analytical potential of the LFS goes far beyond the mere analysis of labour market characteristics.

Another strength of the survey is its large sample that allows detailed analyses of subgroups of the population. The achieved sample of more than 600 000 households in the EU corresponds to roughly 1.7 million individuals aged 14 years and over. For these 1.7 million individuals, Eurostat holds the micro-data, which allows flexible analyses. The survey has been carried out annually for many years, and has integrated the two sets of variables on education and training since 1992.

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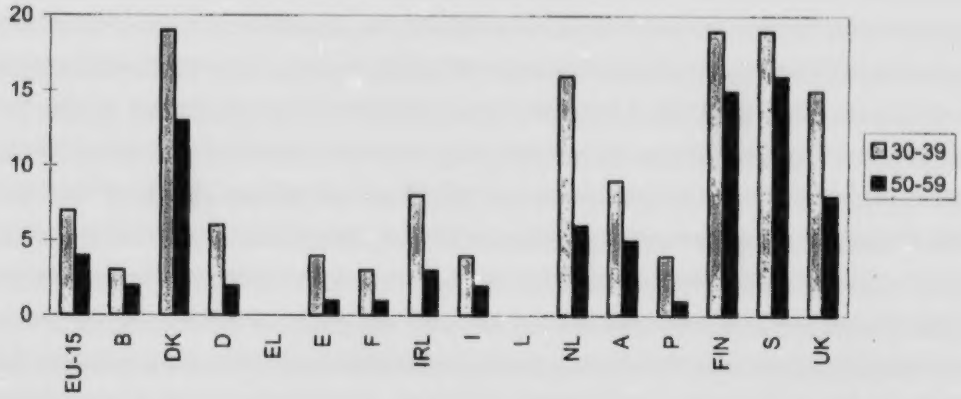
[85] Eurostat, Luxembourg

The following two examples of policy-relevant indicators derived from the LFS have been selected in order to shed a critical light on some of the current political statements in the area of vocational education and training.

Life-long learning and continuing vocational training are both slogans that are receiving considerable attention at the moment. Policy-makers strive to change the model of a life-cycle in which education and learning are concentrated at the beginning to a model in which education and training occur all along the life-cycle, and in which particularly older persons obtain the possibility of continuously adapting their skills to changing needs through training. Despite the efforts that are being undertaken in the direction of promoting life-long learning and continuing vocational training, the available statistics show that this aim is not yet within reach. In order to illustrate this situation the following graph compares the proportion of those in employment who were participating in education or training in the four weeks preceding the interview between two age groups – those aged 30 to 39 and those aged 50 to 59.

Participation rates in training of persons in employment - a comparision



Source: LFS 1996

Footnotes: *The survey measures participation in education or training during the four weeks preceding the interview*
F, NL, P : Information on training is collected only if this is under way on the date of the survey
F : exclusively in-house training is not covered
EL, L : data not available due to small sample size

This presentation clearly shows that what is called continuing vocational training or lifelong learning is currently not so very continuing or lifelong at all. Organised learning is something that is still concentrated on younger people, and the older somebody grows, the more difficult it becomes for the person to actually participate in education and training. This age gap exists in all countries of the European Union, regardless of the different levels of participation in education and training across countries.

Linked to the above, there is a strong policy concern to ensure that those are getting training who need it most. Also in this area, however, the statistics show that the reality lags behind the political agenda. The following graph compares again the percentage of those in employment who were participating in education or training in the four weeks preceding the interview, this time between groups of persons who have obtained different levels of educational attainment. The three categories used are ISCED[86] 0-2, which means having completed at best lower secondary education, ISCED 3, which means having completed upper secondary education including vocational education at this level and ISCED 5-7, which means having completed tertiary education including non-university tertiary education.

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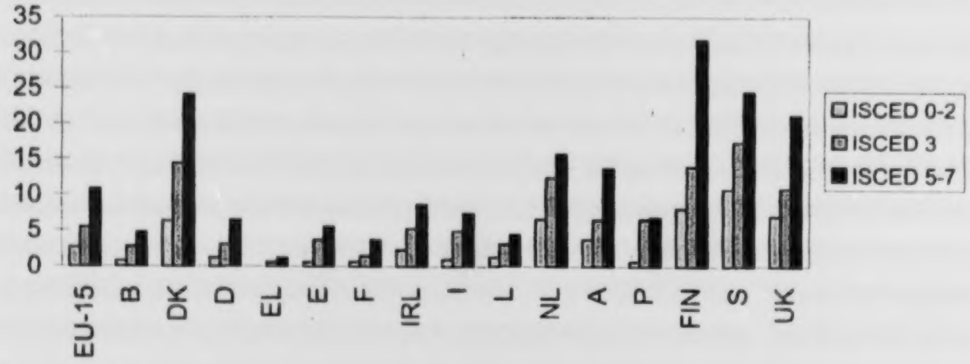
[86] ISCED, the International Standard Classification of Education has been developed by UNESCO to allow the comparison of the various education systems in terms of level and field of education. The levels mentioned here refer to the 1976 version of ISCED. Data using the Revised Version ISCED97 have not yet been collected.

Participation rates in training of persons (aged 30 and over)



Source: LFS 1996

Footnotes: *The survey measures participation in education or training during the four weeks preceding the interview*

F, NL, P : Information on training is collected only if this is under way on the date of the survey

F : exclusively inhouse training is not covered

EL : data for ISCED 0-2 not available due to small sample size

From the statistics it is obvious that in reality it is not those who are least qualified that benefit most from training, but those that are most qualified in the first place. This again holds true for all EU Member States. It means that currently training only rarely has a remedial function in serving to enable persons to make up for initial training they had not received. On the contrary, it mostly serves to increase the skills of the highly skilled.

The LFS will see the implementation of some important methodological developments this year, that are also likely to improve data availability for analyses linked to education and training. From 1998 onwards the LFS will be carried out as a continuous survey that will not only take place once a year as it was the case previously, but continuously over the year. Moreover, the new education and training module will be implemented at the same time, which aims at giving more comparable and more detailed results in this area. Additionally, it is envisaged to attach to the 2000 round of the LFS a special so-called "ad hoc module" devoted to the area of the transition of young people from education to work. It will be the aim of this ad-hoc module to pro-

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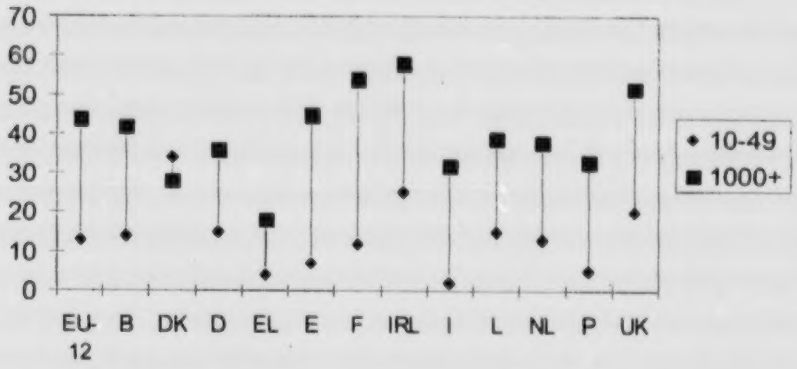
vide politicians and researchers with a comparable insight across the EU into the processes of transition and in particular into the risk factors in the determination of dropout and exclusion.

3 *The Continuing Vocational Training Survey (CVTS)*

The Continuing Vocational Training Survey (CVTS) is a survey that was carried out only once up to now (in 1994) in the enterprises of the then twelve Member States of the European Union. It had an achieved sample of some 45000 enterprises and mainly focused on investment in training in terms of both times spent by participants and financial resources spent by enterprises. Additionally, some information about the kind of training that took place was collected such as type of training (external and internal courses, training in the work situation, job rotation, conferences, etc.), field of training courses (production, data processing, management, etc.) and providers of external training courses (such as commercial training providers, education institutions, producers of equipment, etc.).

The analyses possible on the basis of this survey are less sophisticated due to the fact that not all variables can be combined independently, but nevertheless appropriate to provide some critical insight into the reality of continuing vocational training. Concerning the above-mentioned issue of access to training, this survey allows to shed a light on another determinant of access - the size of the enterprise a person is employed in. The following graph compares the proportion of employees participating in continuing vocational training courses in the smallest (10-49 employees) and the largest enterprises (more than 1000 employees) covered by the survey.

Percentage of employees participating in continuing vocational

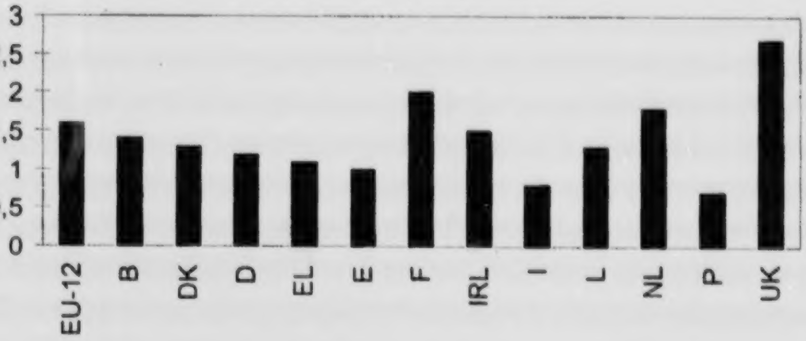


Source: CVTS 1994

In all Member States apart from Denmark, there is an important difference between the participation chances in continuing vocational training courses of individuals depending on whether they are employed in smaller or larger enterprises. Whereas on the level of EU-12 only 13% of employees of the smallest enterprises participated in training courses in 1993, this was the case for 44% of employees of the largest enterprises. Denmark was the only Member State, in which employees had roughly the same chances of participating in training courses, regardless of the size of the enterprise.

The main interest of the continuing vocational training survey was, however, an analysis of the investment into training in its various forms. To give a first insight into this approach, the following graph compares the expenditure on continuing vocational training courses as a percentage of total labour cost. For this calculation, the labour cost of all enterprises was taken into consideration in the denominator regardless of whether they invested in training or not. Consequently, the indicator shows the proportion of total labour cost of the enterprises of a country that has been devoted to continuing vocational training courses in 1993.

Expenditure on continuing vocational training courses as a percentage



Source: CVTS 1994

In the European Union, some 1.6% of total labour cost was invested by enterprises into continuing training courses for their employees in 1993. Differences between Member States, however, should not be overinterpreted, as there is a danger that they reflect more different methodological approaches than actual differences in investment into training. This is presumably particularly true for the UK, where the national survey contained a more extensive module on financial investment, which is likely to have led to the inclusion of more types of expenditure as training expenditure. On the other hand, it seems clear that investment into training is lower in the southern Member States of Portugal, Italy, Spain and Greece.

Due to the high interest of policy-makers in the results of this survey a repetition is currently being envisaged with the aim of extending the coverage to the new Member States Austria, Finland and Sweden that have joined the European Union since. The new survey would not be a mere repetition of the first round, but its list of variables would be adapted to new policy needs that are currently being discussed. It would presumably focus more strongly on different types of enterprise expenditure in order to ensure more comparable and more detailed data in this crucial area, while at the same time maintaining a certain comparability over time to allow trend analyses.

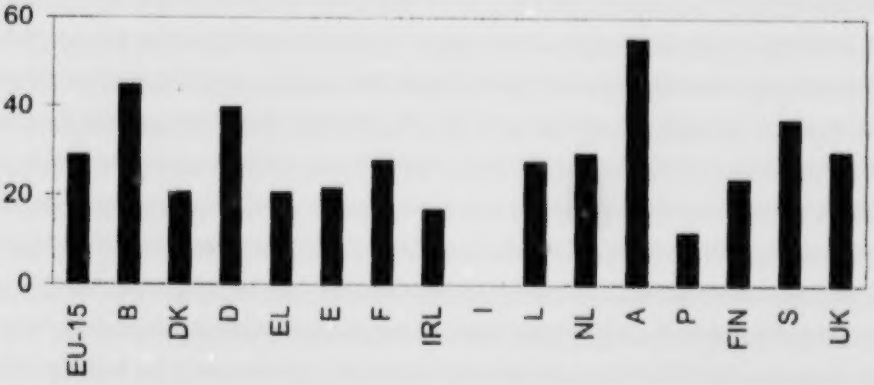
4 The Vocational Education and Training Data Collection (VET)

The most recent data source available in Eurostat concerning vocational training is the Vocational Education and Training Data Collection (VET). Contrary to the two surveys mentioned above, this data collection is based on purely administrative data. It collects both qualitative and quantitative information on vocational education and training programmes that are designed to provide participants with a full set of skills necessary for employment in an occupation or a set of occupations and lead to a recognised labour-market relevant qualification. Most of these programmes are targeted towards young people. Information is being collected on a programme by programme basis. The qualitative part contains information on the theoretical duration of the programme, the authority responsible for certification, the combination of elements of work and school, the status of the participants and other features of the programmes; this is supplemented by quantitative information on the number of participants by age, sex and mode of participation (full time vs. part time). This data collection has taken place annually starting with the reference year 1993/94; currently data is being collected on the reference year 1996/97.

The results of this data collection are currently limited as they are still based on only the first round of the data collection, which was originally meant to be a pilot exercise rather than a full scale data collection.

The first graph shows the proportion of young people aged 15 to 19 that participated in vocational education and training programmes in 1993/94. This gives a first impression of the different importance of vocational educational and training for young people in the Member States of the European Union. Thus, it provides a background for the interpretation of all other data emerging from this data collection.

Proportion of young people (aged 15-19) in vocational



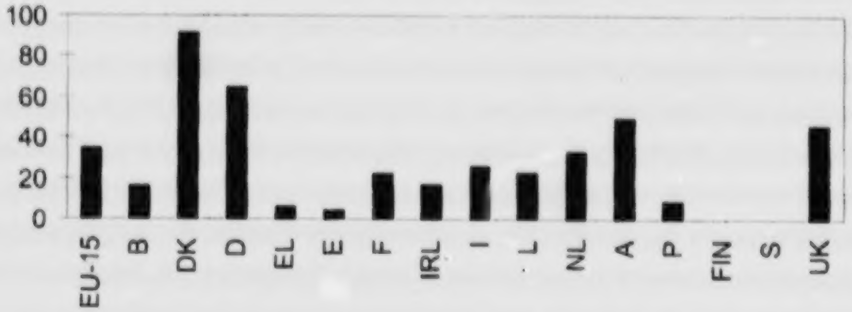
Source: VET

Footnotes:	EL	: 1992/93
	FIN, UK	: 16-19 years old
	I	: data not available

Member States have different traditions of implementing vocational education and training, which are reflected in the proportion of young people participating in this educational stream. Whereas vocational education and training is not very developed in Ireland and Portugal with less than 20% of the 15-19 year olds participating in it during the reference year, it is of considerable importance in Austria with more than half of the age group participating in it during the reference year. This data, however, does not allow conclusions on the proportion of a cohort participating in vocational education and training, as it is both influenced by the duration of vocational education and training and by the fact that vocational education and training attracts considerable number of older participants in certain Member States.

The second graph looks a bit more in detail at the characteristics of the vocational education and training system by trying to give an insight into the extent of involvement of enterprises in vocational education and training. Policy-makers in the European Union are promoting the involvement of enterprises in vocational educational training with a view to rendering vocational education and training more targeted towards the needs of the employers and thus increasing the employment opportunities for the participants. This graph shows the proportion of participants in vocational educational training whose programme has a considerable work-based element, which means that at least 25 per cent of training time is spent in the work place.

Proportion of participants in vocational education and training whose programme has a considerable work-based element (at least 25 % of time spent in the work place), 1993/94



Source: VET

Footnotes: EL: 1992/93

Differences between the Member States are very dramatic. On the one hand, countries with a strong tradition of apprenticeship systems such as Denmark, Germany, and Austria have a very high proportion of their vocational education and training programmes taking part partly in enterprises. On the other side of the spectrum, only a very small proportion of the already very limited vocational education and training provision in the southern Member States of Greece, Spain and Portugal includes the involvement of enterprises. In Finland and Sweden, there is no considerable involvement of enterprises in vocational educational training at all.

The main methodological development foreseen for this data collection, is its extension to cover also statistical information on fields of training. This area is considered as important in the analysis of the chances of young people on the labour market and in the analysis of equal opportunities between women and men.

5 *The production of harmonised statistics*

Finally, I would like to provide a quick overview of the procedures involved in the production of harmonised statistical information by Eurostat.

The creation of a data collection instrument is normally preceded by a respective requirement from policy makers concerning the formulation, evaluation and follow-up of Commission policy. This can be articulated in different ways: there are Commission programmes that stipulate the need for statistical information in order to monitor their own implementation, there are Commission funds like the structural funds, whose policy is based partly on statistical information, there are events like the Employment Summit, which took place in autumn 1997 and which stimulated the creation of new statistical indicators to follow up employment policies.

Once the political need for certain statistics has been formulated, a working group consisting of representatives of the statistical system of the Member States is set up. It does not normally include researchers, but consists of representatives of official statistics in the Member States (the National Statistical Institute or the Ministry concerned) as well as representatives of other services of the Commission like other Directorates Generals or the CEDEFOP. Then Eurostat starts with the development of methodological proposals on how to fulfil this data need including proposals for harmonised concepts, definitions and classifications. This a priori harmonisation can be considered as one of the main tasks of Eurostat. This phase is usually carried out with the help of outside expertise, as there are not enough human resources available inhouse. This phase is followed by the phase of the negotiations with the Member States. The length of this phase varies depending on the complexity of the statistical instrument to be created, but usually lasts between two to three years. Sometimes a specific legal basis for the data collection is created but this is not the case in all areas. Once the agreement has been taken (with or without a legal basis), the data is actually being collected. Following the principle of subsidiary, the Member States are responsible for collecting the data and then delivering it to Eurostat. Eurostat in turn becomes active in a second phase of intense work devoted to the cleaning of the data before it is published.

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Use of abbreviations

B	Belgium
DK	Denmark
D	Germany
EL	Greece
E	Spain
F	France
IRL	Ireland
I	Italy
L	Luxembourg
NL	Netherlands
A	Austria
P	Portugal
FIN	Finland
S	Sweden
UK	United Kingdom

5 Functions, Approaches and Prospects of Comparative Vocational Education and Training Research

Wolfgang Mitter

There is a close interrelationship between the need for research on international linkages and developments in education, and systematic and structured comparison as an approach for the acquisition and enrichment of knowledge. This relationship is based on two fundamental factors whose interaction is becoming increasingly important against the background of the globalizing trends encompassing all dimensions of human co-existence. This thesis, which I have placed at the beginning of my brief presentation, applies generally - without specific consideration of the scientific discipline within which, in a concrete case, a study is designed and conducted; a unidisciplinary approach always calls for multidisciplinary orientation if not interaction; this should be established here as a point worth noting.

One fundamental factor is that the objects of comparative analyses, as applied in comparative education and educational research (in the broadest sense of the term) are States and cultures and their relations with one another. Because of this, the comparative analysis is focused on this structure of interrelationships, both in the 'classical' form of 'internationality' and in the more 'modern' form of 'interculturality', and their manifestation in education. The second fundamental factor is that anyone who is engaged in international and intercultural education, bases his work on a comparison which represents one of the elements of the world perception and world domination of the human being. Even the production of an improved stone tool is the result - albeit unintentional and involuntary - of a comparison with 'older' forms or possible alternatives; the history of human knowledge and its application in daily life could be presented as the history of comparison, whereby a long road, which has by no means reached its end, lies between the unplanned raw comparison and the elaborate comparative procedures applied today. In this connection, Stephen P. Heyneman, Director in the World Bank, and one of the most renowned contemporary comparative educationalists, may be quoted. He states that there is "a plethora of interest and demand, both legitimate and educated as well as manipulative and nefarious, about comparative education questions". The challenge confronting comparative educationalists in any discipline is to divert the interest of the inquirer from a manipulative to an educated inquiry.

For some vocational training researchers this thesis of an explicit relationship between internationality and comparison in the field of education may be unfamiliar even though they have already taken implicit account of it in their own research. Comparative vocational training research does not have to start on a clean slate; I refer here to two German authorities, firstly Aloys Fischer who, as early as 1926, held lectures on vocational training issues in different countries, and secondly, Reinhold Czycholl who, in 1975, that is, more than 20 years ago, proclaimed that "each scientific discipline must, among others, use the comparative method in the pursuit of its aims"; in saying this he was specifically referring to statements from prominent advocates of comparative education.

The purpose of my presentation, very limited in time, is to outline some of the basic issues of comparative vocational education and training research.

Fundamental theses on comparison as a heuristic process

1. At first, a misunderstanding which the comparative educationalist always faces when he tries to explain and justify his working methods, has to be clarified. This misunderstanding lies in the fact that a questioning observer believes that comparability between the selected subjects for comparison always refers to 'sameness'. Apart from the fact that 'sameness' in the social sciences and the humanities can only be comprehended as a 'momentary approximation', scientific comparison targets - to the same extent, if not even more - subjects which indicate 'similarity' and 'diversity'.

2. 'Comparison' can be traced back to its fundamental function of putting objects together so as to ascertain how far they are the same or similar and how far they differ. However, this does not mean that comparisons are always reasonable in every case in terms of the envisaged objective or the given concrete situation. On the one hand, limits are set by the content of the selected subject for comparison. For instance, it is certainly worthwhile comparing forms of training in primitive and modern cultural structures (e.g. "bush schools" versus forms of modern vocational education) in the context of categories derived from cultural anthropology or ethnology. However, a researcher engaged in comparative vocational education and training research who works on current or future-oriented issues, will refrain from making this choice because his priorities are different. Furthermore, limits are also set in practice by action-oriented requirements which the researcher is confronted with when accepting a project which is clearly defined in terms of objective, content and time. This limitation includes policy orientation in its widest sense from planning in a company to supranational decision-making.

3. The basis of comparison is not only delineated by the degree of comparability of the objects in question, but also by the definition of "the criterion for comparison". This criterion, constituting the supra-ordinate frame of reference, is called *tertium comparationis*; it is derived from the objects of comparison which, related to the ex-

istence of two objects, are defined as *primum* and *secundum comparationis*. The formulation of the *tertium comparationis* or, in the case of multi-dimensional research, the *tertia comparationis*, is one of the basic necessities of comparative research, if the researcher does not wish to get trapped in an unstructured mass of data and run the risk of superficial mal-interpretations. The structures and time schedules of vocational training courses can only be compared meaningfully under this aspect if the *tertium comparationis* has been defined in advance, for instance, as measurable technical performance and/or cross-sectional occupation-related competence.

The multidisciplinary context

The step from pre-scientific to scientific comparison, i.e. to its systematized conceptualization and application, coincided with the development of modern science per se. Comparative education boarded the train at an early stage, namely with Marc-Antoine Jullien De Paris and his brochure "Esquisse d'un ouvrage sur l'éducation comparée". Since the end of the 19th century it has occupied a solid, though never uncontested place in the science system. The reasons why this place has been controversially discussed until today, are multifarious, covering the wide range between the self-image of the discipline and its epistemological and action-oriented tasks. Its dependence upon and/or its relations to 'supra-ordinate' disciplines are especially noteworthy.

The international debate is closely connected with the question whether comparative education should be assigned to the humanities or the social sciences. The continuity of the fundamental debate, from differing positions and with changing arguments, was repeatedly marked by "wars of paradigm". It seems that in recent years this debate has subsided as comparative education has developed into the multidisciplinary research area of comparative educational research. The recent trends to be observed in Europe in the formation and development of comparative vocational education and training research, may be considered an 'offshoot' of this supra-ordinate development.

Multidisciplinary, above all, means that comparative education as part of the educational sciences, is dependent, on the one hand, on close cooperation with adjoining social and behavioral sciences: sociology, economics, political science, psychology and anthropology (in particular with regard to intercultural comparisons), but, on the other hand, is oriented to the humanities and also the legal sciences. Comparisons of legal systems and structures have recently gained increasing importance, in line with the growing interest in 'harmonization' in international organizations and, even more so, in supra-national institutions, such as the European Union. In spite of these basic differences on the inclusion of comparative education in multidisciplinary structures, the 'old' and 'new' configurations share the question of the extent to which comparative analyses can contribute to the examination of "universal" or "pluralistic" components of educational problems.

Comparative vocational education and training research derives this multidisciplinary network of relationships from comparative education with all its connecting lines. Given the interdependence between vocational education and training and the employment system, a predominant role is played by economics as one of the social sciences mentioned above.

Research methods, research areas and levels of comparative research

Until recently studies in comparative education were focused on international comparison. This primary orientation has by no means become obsolete, owing to the historical fact that the formal education systems ('schools') of modern times as the favored themes of comparative inquiries, are products and institutions of State policies. It may be stressed that the responsibility of the modern State in this respect has not fundamentally changed over the past three or two hundred years, irrespective of its evolution from its absolutist via its constitutional to its democratic variation. Changes on the political map (through the shifting of borders and through the collapse of 'old' and the emergence of 'new' States) have always had their impact on norms and contents; what is more, they have left their traces on teaching and training methods and educational styles. These statements are, in principle, also true of private schools and schools for ethnic and religious minorities. That is why 'States' and 'nations' play an outstanding role as fundamental parameters in comparative studies.

However, as a reaction to social, political and cultural upheavals at the global, regional and national levels and their effects on the education systems, comparative educationalists have broadened their epistemological and pragmatic interests to cover the following areas.

On the one hand their interest was directed to non-formal and informal educational processes and, consequently, to subjects of comparison 'below the State level': to families, schools, local communities and intra-national regions. In this area comparative vocational education and training research is offered a wide thematic field, insofar as vocational education, in contrast to general education, has always developed more or less at a "distance from the State" (albeit within the framework of legislative and administrative rules). This particularity of vocational education can be related to the power and influence on organization and curriculum exercised by schools, firms and (in particular in the past) families. That is why the interrelation between 'proximity' to and 'distance' from the State appears to be a central comparative theme from the empirical and prospective angle. For instance, comparisons of vocational education and training systems (including structures, curricula, training objectives and outcomes, and also the social stratification of the trainees) in two or more big cities (e.g. Birmingham - Milan - Toulouse) and firms (e.g. Volkswagen - Volvo - Renault) seem to be worthy of future research. Finally, it seems reasonable to apply this range of comparison to the training policy of multinational firms under diverse national and cultural contextual conditions.

On the other hand, the crises of the nation-state and the world-wide migrations of the 20th century have resulted in the emergence of new and/or the outward manifestation of existing but, to date, latent multicultural societies whose members are characterized by ethnic, religious and/or social identities. In this context emphasis has to be placed on a comprehensive concept of culture, which should not be reduced to ethnic concerns, as is often done in multicultural studies. This is why the educational issues of cultural groups have become more and more relevant. In comparative education these trends led to the constitution of the intercultural comparison alongside international comparison as its older counterpart. It can cover subjects of comparison within a State, but also subjects with a transnational dimension (e.g. Basques in Spain and France, Turkish migrants in Germany, France and the Netherlands; children of rural background in the urban communities of different States). In addition, the importance of intercultural comparisons is reinforced by the establishment of cross-national regions (e.g. Alsace/Baden/Basel), especially if they are linked to the analysis of interregional relations of the intra-national type mentioned above. With regard to history, production, labor market and workforce, comparative vocational education and training research opens up a wide range of questions whose comparative categories have to be related to 'industrial culture', 'labor culture' and 'enterprise culture', and then compared with the category of 'school culture'.

As regards the levels of comparative analysis, a distinction can be drawn between two research types which have developed in the 20th century. In the first half of the 20th century comparative education was dominated by 'total analysis', related to national education systems and their historical contexts. Since the 1960s the growing consciousness of the impossibility of attaining such a wide-spread objective by means of empirical analysis or detailed text interpretation, has led to the conception of the problem approach which gained considerable weight. Its main value for comparative education is based on the fact that it opens the door to the examination of 'functional equivalencies' in various fields of education (e.g. subject-matter in theoretical and practical training, vocational qualifications and the time set to acquire them). At first, the 'problem approach' only covered the macro-level of national and regional education systems, but the micro-level of teaching practice has increasingly become a 'competitive' field of research. Recently, micro-inquiries have become more important, e.g. research on 'autonomy' or 'self-determination' in decision-making at the level of lower organizational units such as schools or, in vocational education, manufacturing firms and service enterprises.

The boundaries of the problem approach were re-set by a revival of total analysis, whereby in comparative education some new ideas were obtained from system and evolution theories which were now backed by empirical findings. Comparative vocational education and training research may find it useful to ask new questions resulting from the recent confrontation of universalistic (as demonstrated by the world systems theory and the latest globalization concepts) and cultural-pluralistic theories. In this context, new themes and projects originate from the awareness that predictions about reasonable and optimal strategies in vocational education cannot be made only by identifying 'functional equivalencies' in their instrumental limitation, they also have to include responses which are necessarily rooted in the interpretation of culture-bound attitudes to work, profession, mobility, morality, etc. This integrative approach is oriented to the confrontation between universalism and cultural pluralism as the central driving forces of thought and action, and also oriented to the question of the

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ability of people to respond to the challenges of globalization and the relation of these challenges to their specific cultural frames of reference. Such reflections line the path to 'international' concepts on the one hand, and 'intercultural' concepts on the other.

The selection of the research approach and the delineation of the research area are closely connected to the question of the function assigned to international and intercultural comparison. In this context it is worthwhile taking a look at Wolfgang Horner's classification model. He makes a distinction between the a) ideographic function (as the 'quest for the singular' in the subjects for comparison), b) the melioristic function (as the 'quest for better models'), c) the evolutionist function (as the 'quest for the development trend'), d) the quasi-experimental function (as the 'quest for the universal').While the melioristic function can be derived directly from the practice-related task of system and quality improvement, the other three functions are directly related to epistemology. It would however be fallacious to define 'system improvement' and 'epistemology' as mutually exclusive 'super functions'. The following arguments refute this.

Firstly, the development of 'better models' cannot be undertaken without recourse to the other functions with their multicultural foundations - a fact which should be stressed once again here. Secondly, the 'non-melioristic' functions have shown increasing signs of direct links to practice, especially in recent times. Thus, the ideographic function becomes important for all comparative researchers who wish to make a contribution to the preservation of cultural pluralities. In the quasi-experimental function, where the comparison assumes the function of the (scientific) experiment, the purpose is to examine hypotheses set up for the verification or falsification of general scientific theories or laws. Here, the question studied is to what extent certain phenomena can be explained from the multi-dimensional context of a system represented by a nation or a culture, e.g. objectives and contents of curricula, teacher or student behavior.

Reflections on the evolutionist function are rooted in the fundamental question, to which degree the application of comparative methods points the way to the identification of regional or global development trends and, furthermore, permits predictions or judgements of such trends, or even sets up 'laws' concerning the relations both inside the education system and between this system and processes in society on the whole.

In comparative education this far-reaching issue always plays an important role. In this context special reference has to be made to the trend analyses continuously conducted by international and supra-national organizations, such as UNESCO, OECD, the World Bank, ILO, the Council of Europe and the European Union. Furthermore, research undertaken with an 'evolutionist' aim has received an impetus from the question of how and to what extent international and intercultural comparison can contribute to building up theories on modernity and post-modernity with regard to their globalizing trends. In particular, these questions were updated through the stimulating impacts of the world systems theory, conceived by I. Wallerstein, and its further elaboration in the sociological theory of J. Boli, J.W. Meyer and F.O. Ramirez and the comparative educational studies conducted by Christel Adick and Jürgen Schriewer. In addition to this, in recent times, there have been moves to develop a comprehensive globalization theory to which Roland Robertson, Anthony Giddens and Ulrich Beck have made extensive and stimulating contributions.

Prospects

In his analysis of the 'state of the art' mentioned above, Stephen Heyneman[xv] stresses the discrepancy he has observed between the growing need for political and economic activity in the field of comparative investigation and a 'gridlock of ideas'. He himself decidedly supports a research policy oriented to this need with respect to the choice of themes and determination of objectives and methodology. This view entails the extension of the range of observation, within which the extra-university 'periphery' (e.g. parliamentary committees, bank conferences, meetings of foundation boards, company marketing seminars) gain growing weight in relation to the 'centre', occupied by the universities. In the narrower sense, national governments and administrations as well as the big international and supra-national institutions, organizations and agencies (European Union, Council of Europe, OECD, UNESCO, the World Bank, etc.) are to be included in Heyneman's priority list which, in general, should be considered by comparative vocational education and training research as a stimulating appeal.

Confronted with Heyneman's interpretation of the 'state of the art', universities and extra-university research institutes are challenged to break out of the 'gridlock of ideas' and to engage in policy-oriented tasks (in the widest meaning of this term); this

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is already reflected in the large number of research programs and projects. This engagement is not only necessary because of the growing dependence on available financial resources, but also because of claims raised by the members of the education systems: teachers, trainers and tutors, parents, administrators and, last but not least, pupils, students and trainees. Accepting 'external' practice-related demands does not, of course, necessarily imply a neglect of the continuing efforts in the theoretical field focused on the review of content and methodology. Besides overcoming theoretical ('inner-academic') and pragmatic (economic, financial, political) deficits, comparative vocational education and training research will continue to be disturbed and restricted by the 'unreliability and narrowness of educational statistics' and must, therefore, make its contribution to the development and refinement of mechanisms for collecting and analyzing educational data.

Above and beyond the criteria which are immediately related to its 'basic strategies', comparative vocational education and training research must continue to tackle issues concerning its thematic range. Apart from the 'classical' themes which have by no means become obsolete and have to be dealt with in the system of vocational education at the secondary level, new areas of research have become more and more relevant, such as continuing vocational training with its complex and flexibility-oriented structures, the interdependence between vocational education and its 'general' counterpart on the one hand, and the employment system on the other, the special interrelation between (non-academic) vocational education and higher education; furthermore, issues concerning attitudes and socialization processes of youth and adults; and finally, interaction between technology, culture and education and, in particular education and multiculturality, the latter against the background of the challenges raised by growing mobility and migration.

When comparative researchers identify all these thematic areas and their exemplary restrictions in this context, they have to find answers to the following fundamental questions:

- How do the 'others' identify the problem posed?
- Why are they affected by this problem (in the given historical situation)?
- How do they try to solve this problem?

By answering these and further questions, comparative educationalists and researchers are challenged to extend and develop their field of work (in thematic, methodological and general-theoretical terms) as well as to offer their support to policy-makers and 'practitioners' (in the widest sense of the term).

Comparative vocational education and training research has just started with its systematic and future-oriented work. The ideas and suggestions it can receive from 'classical' comparative education will certainly give it a solid foundation. But it should be stressed that this does not imply a monopoly. Comparative vocational education and training research also needs impulses from comparative research in economics, sociology and political science. The education system in general and vocational education and training in particular are so complex in terms of their structures, contents and prospects, that their problems cannot be defined, leave alone solved, by one single discipline. The linking of all these approaches can only be undertaken on a multidisciplinary basis and requires efforts on the part of the researchers to develop interdisciplinary concepts. This applies to the individual disciplines and even more so to the transnational global system which comparative vocational education and training research has to cover.

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Workshop 1:

Methodological questions of comparative voational education and training research

David Parkes[87]

There are six headings to the brief report.

- context, complexity and classification;
- policy, practice and purity;
- illumination, illustration and illusion;
- common problems, different solutions;
- methodological integration;
- what advice to CEDEFOP?

1. Context, complexity and classification

In the papers within working group 1 there is a mixture of theory (why?), method (how ?), practice (what?) applied to the specific complexity of VET found in a difficult to define 'Europe'.

Given the difficulty of both the intellectual and the geographical terrain there is a plea, from the researchers in the group, for historical and cultural specificity and a standing back from immediate isolated policy initiatives. In short, the more complex the content the more difficult it is to specify an hypothesis and set up a framework for the collection of empirical evidence and its subsequent analysis. Classification is a partial means of overcoming the problem of placing limitation on the variables but does not allow to fix their allocation for always and ever.

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2 *Policy, practice (and purity)*

The basic questions asked are "what is the research for? Who's paying for it?

Policy driven initiatives (or 'relevant' research) tend to be relatively light on analytical content; a subheading might be "rhetoric and reality", the policy 'rhetoric' as opposed to the practice 'reality', The 'Leonardo' and 'Socrates' programmes are both guilty since there is a policy presupposition of European cohesion which unwrapped becomes full of intellectual contradictions. The project portfolios contain many examples of collaboration without comparison or comparison without collaboration.

3 *Illumination, illustration and illusion*

Even a carefully defined case series requires a large number of samples to make the comparative findings interesting let alone legitimate. Case studies tend to the illuminative rather than the definitive. If this is so then what other methodologically respectable approaches can be applied to make sense of statistical, historical and cultural complexities?

This raises the question of whether "the illuminative" is legitimate? Does comparative method hinge on examining assonances and dissonances (similarities and dissimilarities) which highlight critical issues of single systems or subsystems or identify areas where co-operation may be possible or helpful. The question is what and how can we learn from others? In this we return to the section -content, complexity and classification and ask another question on how to balance phenomenological vs. system based approaches.

4 *Common problems, different solutions*

The convergent and divergent trends presented within the papers of group 1 indicate that neither the common factors pressing on national policy formation for education and training, nor the priorities that most EU member states share, are necessarily leading to a uniform pattern of convergence. Example given are:

- institutional structures/comprehensive or selected schools;
- post secondary complexity;
- governmental and local organisational solutions around decentralisation

Methodological integration

One paper in particular, in an attempt to 'define and limit the variables, examines measurement problems based on:

- too short time scales;
- discontinuous observation;
- mixed individual and collective experiences.

The solutions involve an improved mix of cross-sectional and longitudinal surveys.

If we take this last heading then it is clear that in a sub sector as complex as VET and as subject to 'relevant research' then the 'illuminative' will take precedence over the 'definitive'.

6 *What advice/questions to CEDEFOP and the European Union?*

Can we classify the donors and sponsor for VET research? Are they multinational, bilateral, private? Can the research be co-ordinated rather than retrospectively classified?

Conversely, is a coherent perspective possible or desirable? In a complex environment is it necessary to have a holistic view, whether of the systems or the research?

Is CEDEFOP on the side of the angels? Does it stand for 'relevant research' or does it have a 'purer' longer term view?

How are the research agendas balanced among say OECD, DG22, CEDEFOP, ETF?

If CEDEFOP is to play a central role, can it be an arbiter among the research sensitivities of DG12, the rather anarchy of DG22, the possible influence of DGV?

1 Trends of convergence and divergence in the systems of education and vocational education and training of the Member States of the European Union

Tom Leney and Marcella Deluca

This report is based on the findings of a research project carried out at the Institute of Education, University of London, between January and July 1997 for the European Commission's DGXXII. The views expressed in this contribution are the responsibility of the authors alone, do not necessarily represent the official position of the Commission or of the Member States, and do not implicate the Commission in any field of action.[88]

Aims and context of the research

The purpose of the research was, firstly, to analyse the trends in policies and practices in the education and training systems of the current member states of the European Union over the past decade. The second purpose was to contribute to an understanding of the trends of convergence and divergence that we found, and their policy implications at European level.

Although our remit was to rely on secondary sources, undertaking such a broad study in a relatively short period of time required a clear focus. Therefore, the research team at the Institute of Education in London decided to concentrate on a number of thematic areas over several sectors of education and training. The work of the project team was supported by consultants, who prepared thematic country reports and made detailed comments on drafts of the report. The sectors on which we reported are: the national, frameworks for regulation and governance; the lower secondary phase of compulsory education; the initial phase of post-compulsory education and vocational education and training; and, continuing and higher education and training. The main thematic areas that the full report covers are institutional structures, governance and regulation, curricula and qualifications, and participation and outcomes.

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[88] Note: The full report **Convergences and Divergences in European Education and Training Systems,** on which this conference paper is based, was written by Andy Green (lead researcher), Alison Wolf and Tom Leney; Marcella Deluca was the project's research officer. A working paper based on the full report, which is over 220 pages long and contains a 23 page bibliography, is scheduled for publication by the European Commission in the summer of 1998.

The report was commissioned by DGXXII at a time when its reflection group was considering the directions that the new phase of EU policies and funded programmes should take in the field of education, training and linked research. We drew on a wide range of publications of the European Commission and its agencies, as well as other international and national sources. It is of interest that a number of reports that attempt to make progress towards a European dimension of research in the fields of education and training have been published while our work was underway, or since its completion. Included here are: Eurydice's studies of secondary education and of ten years of reform of compulsory schooling, as well as the publication of the agency's database on EU education systems (Eurybase) on CD Rom and the internet; Eurostat and CEDEFOP's joint publication at the end of 1997 of Key Data on Vocational Training in the European Union; and, a little earlier, the Leonardo and Comett teams' attempts to bring together national data from across Europe on continuing training, which has begun to make a serious contribution to comparative analysis in this domain possible. The importance attached to developing a European level of research is growing, and we hope that our report is also able to suggest some pointers that are helpful in this direction, and to add a few words of caution. Our research also coincides with a concentration of minds on the implications of enlargement for European policy on education and training, and with the development of 'observatories' in the field of European vocational education and training, as concerns the systems of both Eastern Europe (through the work of the European Training Foundation) and the member states of the European Union.

This paper draws together, in a summary form, aspects of our report on convergences and divergences that were most relevant to the subject of the CEDEFOP/DIPF conference held in Bonn. First, we provide an overview of the convergent and divergent trends, and a brief exploration of some of the underlying factors. Then we will examine in a little more detail, in turn, the trends in initial post-compulsory vocational education and training, and in continuing education and training.

Overview: Convergent and divergent trends, and some underlying factors

Overall, a substantial level of convergence has developed in the national policy discourses for education and training in the member states of the European Union, and in the general policy objectives in many areas of education and training. Nevertheless, continuing national differentiation exists with regard to specific policy measures and, in an apparently durable way, with regard to key structures and practices. Thus, national governments and systems are responding in many respects to a common set of themes and challenges, but each one does so in its own particular context of education and training systems and processes, and in the context of its wider structures, systems and prevailing beliefs.

This can be illustrated, perhaps, with reference to an area of education that falls outside the specific field of vocational education and training. For the final stages of compulsory education - the lower secondary phase - the main policy objectives are congruent across the EU, and lay emphasis on the acquisition of basic competencies by as wide a range as practicable of young people in the age cohort, and this is seen more and more as a preparatory stage for progression to further education and training. One outcome is that in many member states a delay has occurred over the last decade or so to the age in the young person's career through school at which he or she is expected to specialise. Yet at this stage a diverse range of structural arrangements continues to be in evidence across the member states, and these systems do not show any marked trend of convergence. For the most part, the basic structures of lower secondary education were already in place in 1984, and only a few major changes have taken place since then[89]. These structures vary from the continuous systems of basic education found in the Scandinavian countries and Finland, to the comprehensive, lower secondary phase found in France, Italy, Scotland and, since reform, Spain and Portugal, and to the differentiated systems found in Austria, Germany and Belgium and the selective lower secondary system of Luxembourg. These distinctions are illustrated in Table 1.

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[89] The most important changes have taken place in Spain and in Portugal, which have moved to a comprehensive form of lower secondary schooling, a change associated with a significant raising of the compulsory school leaving age. There have been no other fundamental reforms of the basic structures, although in Austria, Germany and the Netherlands the development of polyvalent schools that provide more than one track within an institution has the potential to loosen the previously rigid differentiation of young people into different tracks from an early stage in their secondary education.

Table 1: Structures of lower secondary education in the Member States

	Structure	Examples
1	Basic education is continuous through the full-time, compulsory phase, and the system does not distinguish between primary and lower secondary schooling	Sweden, Finland, Denmark
1	The system makes a clear distinction between primary and lower secondary phases, and young people are not separated into specialist or selective tracks for the lower secondary phase	France, Scotland, Italy, Greece, Portugal (after reform), Spain (after reform), England and Wales (broadly speaking)
1	The system makes a clear distinction between primary and lower secondary phases, and the majority of young people are separated or selected into differentiated tracks or kinds of education for the lower secondary stage	Germany, Austria, Luxembourg, Northern Ireland Also Belgium, Netherlands, Ireland

Somewhat similarly, all member states have experienced major increases in absolute numbers participating in higher education. However, rates of change and actual participation levels vary, while at structural level major differences remain between countries with a clear binary divide, and others with unitary or institutionally diverse systems. No convergent trend here is evident. Indeed, in certain important respects national structures for higher education are becoming more divergent.

As the later sections of this paper show, we found the trends in initial and continuing vocational education and training to be equally complex. Therefore, and to help make sense of this quite complicated pattern of congruence, convergence and continuing divergence (parallel development in some cases), it is worth drawing attention to some of the common factors that are shaping member states' education and training systems, before identifying key policy priorities that the member states share by and large. The common factors that are shaping European education and training systems have received a good deal of attention in the literature, and include the following: accelerated technological advance and the revolution in information technologies; global economic competition and the shift to high value-added production and services; changing industrial and employment structures; reorganisation of work; demographic change and the ageing of European populations; budgetary restraints; and, cultural change, in particular: rising aspirations, cultural diversification and social pluralism.

In their response to these factors, which may frequently be in tension with one another, we can identify several common policy priorities that the EU member states largely share. Governments are seeking to:

- Generalise high level skills and knowledge among as many young people as possible
- Develop lifelong learning and a 'learning society'. This is seen as requiring movement towards multiple learning sites, diverse and flexible pathways, virtual learning networks and a learning culture
- Internationalise the higher education system
- Encourage broad-based education and the acquisition of transversal skills, with a new emphasis on areas of learning that include linguistic and cultural understanding; creativity; flexibility; problem solving; team working; collective intelligence; and, proficiency in harnessing the growing potential of information technologies
- Bring education and work closer together, notably through enhanced partnerships between social partners/stakeholders, and new forms of *alternance*
- Introduce flexible and imaginative responses to school failure and social exclusion
- Improve efficiency and accountability. Commonly this involves the attempt to develop some form of decentralisation of governance and regulation, which may in turn be linked to new forms of funding and evaluation.

However, as we have already begun to indicate, neither the common factors pressing on national policy formation for education and training, nor the priorities that most EU member states share, are leading to a uniform pattern of convergence. Decentralisation, to take one theme as an example, is an important policy consideration across the EU, but the form that it takes and the extent to which it is a defining or subsidiary feature varies greatly from one Member State to another[90]. The member states were at differing starting points a decade ago, and the rate of change - in terms of both quantitative indices and qualitative institutional and regulatory arrangements - varies from one member state to another across the different themes and sectors. In different member states decentralisation takes, variously, the following forms: regionalisation (geographical or linguistic), regional deconcentration, local control, diversifying control to the social partners, and the development of institutional autonomy and the quasi-market. In this and other respects, countries are responding to common challenges in different ways, and this should be seen as an expected outcome of the different national contexts. Here, the national contexts are of particular importance in a number of key respects - industrial and employment structures; labour market organisation; political, educational and institutional structures and processes; and, developments in national knowledge and citizenship traditions.

Finally, it is worth emphasising three key aspects of institutional differentiation that underpin - and in some cases even increase - the extent of national differentiation in the systems of education and training across the European Union. Firstly, the institutional structures of compulsory schooling are divided on a selective to comprehensive axis, with a number of member states occupying positions somewhere between the poles. Secondly, there is a clear distinction between structures of upper secondary and foundation training that are primarily school-based systems, and those that are primarily work-based. Thirdly, the decentralisation of governance and regulation varies in degree; and it varies in form.

Trends in initial post-compulsory education and vocational training

For a large majority of young people in the European Union, the end of compulsory schooling is a somewhat irrelevant formality. The modal pattern now includes education and training well beyond the school leaving age. There is a clear pattern of convergence here. As the economies of the poorer Member States have grown (notably in Spain and Portugal), so participation rates have soared; while the United Kingdom, which was for many years a exception to the general pattern, has also now moved to a system of higher participation in post-compulsory education and training. The degree of convergence is masked somewhat by continuing inter-country differences in the length of secondary schooling, the typical age for transfer to tertiary programmes, and the organisation of university studies. Participation rates at 18 and 19 vary considerably because in some countries students this age are still completing upper secondary studies, while others have finished. There are also major differences in the average length of university studies, and thus in full-time participation for those in their 20s. Nevertheless, the underlying pattern is convergent and shared.

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[90] Our full report and working paper deal with this aspect of regulation in some detail.

The post-compulsory phase nonetheless remains distinctive because, in every member state, it corresponds more or less precisely with a point of increased differentiation in the education and training system. This is true even in countries which operate with multi-track, selective systems at lower secondary level. Post-compulsory education and training opens the possibility of work-based approaches, including, most importantly, apprenticeship; and the latter is very important in a number of Member States which have differentiated systems at lower secondary level.

In analysing the development of Member States' initial post-compulsory education and training systems, four themes emerge as of particular importance. These are, firstly, the 'academic drift' which can be discerned in all Member States, in both the qualification choices made by young people, and, even more, in the changing nature of vocational programmes; secondly, the prolongation of labour market entry, and the associated tendency to accumulate a portfolio of qualifications; thirdly, the absence of convergence in the area of apprenticeship; and, finally, the continuing efforts of all Member States to develop effective and innovative programmes for disadvantaged young people. These are discussed in turn below.

Academic drift and the logic of rising participation

The proposition that Member States exhibit a convergent pattern of academic drift in post-compulsory programmes may appear at odds with countries' own statistics. Summaries of enrolments in general and vocational programmes at upper secondary levels show, for most countries, both a preponderance of enrolments in vocational tracks and high stability over the last decade in the proportions assigned to each category. However, this apparent stability conceals important changes. Many of the programmes classified as 'vocational' are neither designed as a direct preparation for work, nor seen in that light by their students. While they may have evolved from courses, which were workshop-based, in many the balance has shifted so that time is increasingly devoted to a classroom-based, academic curriculum. In other words, the role played by so-called 'vocational' upper secondary courses is less and less one of direct preparation for corresponding occupations. Instead, these courses function increasingly as an alternative route through and upwards within the formal education and training system. The changes which are taking place, EU-wide, in course content and format reflect this development.

These changes are partly a response to labour market changes; the decline of unskilled jobs, the increasing importance of service sector occupations, which emphasise the 'academic' skills of high level literacy and numeracy, and the impact of technological changes. However, they are also a direct result of previous increases in participation rates, and in that sense self-fuelling and self-perpetuating. They follow from the cumulative decisions forced upon young people, their parents and their employers once a certain critical mass of participation has been reached: once a certain proportion of the population is obtaining particular credentials, the pressure on the remainder to do the same increases enormously. In 1950s Europe, only three per cent, not 33 per cent, of the age cohort attended university. In France, for example, as recently as 1981, 34 per cent of French young people followed a *baccalauréat* programme: today the figure is over 70 per cent. The nature and purpose of 'broad vocational' programmes is, in many cases, changing. Thus, the '*bac. techno.*' is generally classified as a vocational course for international statistical purposes; and, indeed, it was originally conceived by the government as a labour market entry route. But in fact it is a general academic course, akin increasingly to the general rather than the vocational *baccalauréat;* it is taken by young people most of whom wish to enter higher education, and is not viewed by employers as 'vocational'.

Rising qualification rates lead to a change in the decisions that young people face and alter the perceptions of employers. In a situation where only a few complete an academic award, employers know that the vast majority of able and desirable employees are to be found in the non-qualified pool. But when the participation and qualification rates rise rapidly, as has happened across the EU in recent years, employers appear to conclude that the increase in academically qualified young people has come from the upper end of the ability distribution curve, and that the unqualified come from the ability 'tail', so that it would be risky to employ them. So, they hire the academically qualified and, in so doing, they also help to increase participation rates and academic drift. Correspondingly, while some young people will conclude, consciously or unconsciously, that they are stuck at the bottom, most will want the world - in the form of the 'gatekeepers' of tertiary education and employment - to see them as belonging to the top or at least the middle of the ability/achievement distribution. This means they need to stay in education and training and, since general or academic qualifications enjoy the highest prestige, the pressure is to opt for the most academic option they can manage.

This logic has helped fuel the 'academic drift' that is apparent in all Member States, albeit mediated by continuing and major differences between member states in the organisation of post-compulsory provision. It is manifested, first, in absolute increases in the numbers taking general or academic[91] options at this level. The absolute proportion of the age-cohort taking academic upper-secondary courses has increased generally. At the same time, because overall participation rates have also increased, the ratio of academic to vocational enrolments has remained quite steady. A sort of domino effect means that, as students enter academic courses who 15 or 20 years ago would have selected vocational ones, other students enter vocational courses who would in the past have entered the labour market at this age.

An equally important aspect of academic drift is the way in which participants view upper secondary vocational courses. Increasingly, students select vocational courses, which offer the possibility of further progression into tertiary study, and identify such progress as their goal. This trend is independent of the regulatory model adopted by a country, of its organisation of lower secondary education, or of its tertiary framework. Thus, in Austria, commentators for the Ministry of Education argue that the vocational aspects of upper secondary technical courses are being outweighed by their offer of university entitlement; in England, the large majority of students selecting the full-time vocational 'GNVQ' courses identify progress into tertiary studies as their objective; in Spain, those upper-secondary level vocational courses which do not offer a progression route are comprehensively rejected by students and parents.

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[91] In this paper we use the terms general and academic interchangeably

A parallel indication of change is the way in which 'vocational' qualifications have become more general in content. Across the EU there have been near-universal efforts over the last 15 years to upgrade the content of vocational courses in this way. However, the structure and content of the parallel upper secondary academic options have changed relatively little.

These changes are partly a reflection of economic and labour market demands, but also, and more immediately, a response to student pressure and popular aspirations. They are designed to make movement between different tracks a practical reality, and so increase the desirability of vocational options. The degree of possible movement varies. For example, in France and in the UK, upper secondary academic[92] and vocational options both have a formal status that gives access to higher education entry, but there is in fact a clear hierarchy whereby academic qualifications provide better access to more desirable courses. In the Netherlands and Belgium, progress involves well delineated movements between upper-secondary options rather than their formal equivalence (for example by adding an extra year's study prior to university entry); while in Germany, although apprenticeship remains a distinctive system, pathways are being developed into higher education through the polytechnics (*Fachhochschulen*).

Movements to upgrade vocational track content, and to increase opportunities for progression, undoubtedly reflect a European-wide trend. Governments often present them as a way of increasing the status of vocational options, but we would question whether this has been achieved in any member state: rather, such movements tend to maintain entry into what would otherwise be a decreasingly acceptable pathway for young adults. As noted above, the changes that have taken place have all tended to make vocational tracks more academic rather than vice versa; the convergence between tracks involves giving more time to established, core general education subjects. Finland provides a modal example of this trend, and also of the limitations of vocational upgrading taken in isolation. Reforms that were designed by the government in the 1980s to make vocational education increasingly and substantively attractive had no such effect. The concrete result of the reforms was to broaden the vocational curriculum to include more general education; but the academic and vocational schools remained quite separate in prestige and public perception, and pressure for entry into the academic streams continued to increase. Similar experiences can be recounted in the majority of Member States.

Prolonged labour market entry and the accumulation of qualifications

The transition from 'youth' to adult life has become more complex and more delayed in recent years. Depending on how the transition is defined it may be said that the process has become longer, or that it is starting later *and* ending later. If we define the beginning of the transition as the age when 75 per cent of the age group are in education and not employed, and its end as the age at which more than 50 per cent are employed and not enrolled in education or training outside the workplace, then the average starting age is now 17, the end 23: and the process has been delayed by a full year (again on average) in the last decade.

One corollary of this development, and one where there is substantial convergence between Member States, is the tendency to accumulate multiple qualifications before, and indeed during, the process of initial insertion into the labour market. The reasons for this are comparable to those advanced for the phenomenon of academic. In some countries, this phenomenon is experienced as a spiral of qualifications; for example in France, where, as increasing numbers obtain a *baccalauréat,* so demand increases for courses leading to higher technician awards. In others, one qualification is used as a way of increasing the holder's chances in competition for another, desirable one. This has happened in Germany, where a stable share for vocational students in upper secondary programmes masks major changes. Overall increases in qualification rates include a big rise in those taking the *Abitur*; and the best apprenticeship contracts go to *Abitur* holders, who may combine apprenticeship with university study. Meanwhile, within 'vocational' upper secondary education, courses, which allow for tertiary entry (and so further qualifications), have enormously outstripped those (in the *Hauptschulen*), which do not.

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[92] We use the terms academic and general interchangeably when describing post-compulsory courses

The trend for young people to start a different course when they experience failure in their first is also evident in a large number of countries, although data problems make it impossible to tell how far it is a universal tendency, or by exactly how much it has increased. For example, in Austria, the rising average age of apprentices is due largely to drop-outs from other courses entering apprenticeship; in England, over a third who drop out of the school-based advanced GNVQs immediately start another course of study; while in Finland the young who have failed to obtain university places increasingly enter higher-level vocational schools as a holding strategy while they reapply to university, with no intention of following the occupations involved. The Netherlands provides a well-developed example of this trend, and may therefore be of particular interest to policy-makers concerned with the next decade's patterns of demand from young people.

Another aspect of prolonged labour market entry that is increasingly evident and noteworthy is the tendency to combine later stages of study with part-time work, often in areas quite unconnected with the field of study. The age at which this becomes common varies between states, and depends on a variety of factors, including both unemployment rates and labour market characteristics such as the structure of payroll taxes. In England and Wales almost half of 16-18 year old full-time students also have a regular part-time job. It is impossible to obtain comparable data for the EU overall, and it is unlikely that most countries' rates for teenagers approach this level; conversely, in Member States which have experienced greatly extended lengths of university studies (notably Germany and Italy) this pattern is increasingly common for students in their 20s. What is clear is that the old pattern whereby study stops and work then begins is increasingly at odds with young people's experiences across Europe.

Apprenticeship and the persistence of labour market practices

Both government policy-makers and the social partners have, over the last 10-15 years, shown increasing concern with the development of close links between school-based education/training and the workplace. Many Member States have initiated policies designed to strengthen or develop apprenticeship; even more have developed alternance programmes, in which young people are involved in on-the-job learning.

However, in this area, very little genuine convergence can be discerned. A survey of the last 10-15 years' experiences in the fifteen Member States indicates that, while governments may be able to effect quite rapid as well as radical changes in formal education and in school-based training policies, labour market practices are far more deep-rooted and resistant to change.

It is important, in this context, to distinguish between apprenticeship and alternance, because they have very different consequences for labour-market entry and for individual trajectories. Apprenticeship is a form of vocational training which involves in-company training, is generally highly regulated, leads to a qualification and is distinguished by a contract which means that the primary status of the apprentice is defined in relation to the employer, not the state. Alternance differs in that — while it also involves in-company training, is more than an internship, and leads to qualification — its defining characteristic is the nature of the learning programme, which combines on-the-job with school-based instruction. It is not defined in terms of regulation or the young person's legal status vis à vis the employer. While apprenticeship programmes may meet the criteria for alternance, the reverse is by no means always true.

The Member States can be divided into four broad and approximate groupings with respect to apprenticeship. These are shown in Table 2.

Table 2: Apprenticeship models - by status and participation

A High status, high participation. While not enjoying the same status as the academic high school/university pathway, apprenticeship enjoys status and respect and plays a central role in the way the labour market functions, including that for leading edge companies. (e.g. Germany, Austria, Denmark)	**B Moderate to high status, moderate participation.** Associated mainly with craft and technical sectors; but can offer opportunity for progression professionally and to HE, as well as to skilled worker status. However, many young people will follow full-time schooling rather than apprenticeship. (e.g. Netherlands)
C Low status, moderate participation. Apprenticeships are relatively numerous but are regarded as definitely less desirable than school-based pathways and have become, in most cases, the last choice of young people (e.g. France).	**D Low participation, low status.** In a number of countries, apprenticeship has effectively vanished except as a part of alternance-based 'remedial' programmes. (e.g. Belgium, Finland, Ireland, Greece. Portugal)

The most striking fact about contemporary European apprenticeship is that each member state is to be found in the same grouping (Types A, B, C and D) today as it was in 1984. In countries where apprenticeship is highly valued and supported by companies as a way of selecting and training workers, it endures. In those where this is not the case, government efforts to upgrade apprenticeship's status - of which there have been a good number - consistently and almost without exception fail.

Alternance programmes, by contrast, have attracted wide interest across the Member States. Convergence is so far apparent mainly at the level of policy discourse. As more and more students stay in full-time education for prolonged periods, concern has increased that formal education provides only a limited preparation for working life. One way in which governments have responded is through a general increase in the role assigned to the social partners in vocational education, especially at the national level: Greece and Italy are exceptional in not doing so to any significant degree. Moves beyond this involve the establishment of alternance programmes. These in turn take two forms: emergency measures for disadvantaged young people, which are discussed further below, and pedagogically inspired programmes aimed at familiarising students with the concrete conditions of the workplace.

It would be an exaggeration to describe Member States as converging in their enthusiasm for and creation of such pedagogically inspired alternance. Overall, the differences between countries are as great in the late 1990s as in the early 1980s. Nonetheless, there is a definite trend toward emphasising and encouraging alternance, and this is especially obvious in states without high-status apprenticeships. Examples include the requirement for quite lengthy workplace experience in the French vocational baccalauréat; the development of the Spanish Alternance Training Scheme, and the Irish reforms launched in the 1992 Green Paper.

Programmes for the disadvantaged

At a number of points in this paper, we have noted the effects of a labour market characterised by high unemployment, not least among young people, and falling demand for unskilled labour. As a result, all Member States find themselves faced with an increasingly disadvantaged category of young person, crowded out of the labour market, without credentials, and disproportionately likely to come from families with multiple problems. The challenges of inclusion have been mentioned in the context of lower secondary education. They are equally if not more acute at this level.

Over the period under review, programmes to help disadvantaged young people have become a priority across the EU; and there is also a general trend to develop alternance programmes aimed at providing an alternative to traditional education and training pathways for those with low academic achievement. (In the past, the alternative for these young people was direct labour market entry.) However, while the challenge, and the favoured emergency response, can be seen as 'convergent', it is also evident that Member States find the problem intractable. Evaluations of emergency-type programmes that adopt an alternance approach are generally not encouraging; but it is also true that rather little is available in the way of high quality evaluations of different countries' programmes and responses. This area must be seen as an enduring problem and challenge.

Trends in lifelong learning and continuing vocational training

The economic developments associated with 'globalisation', and the demographic shifts which make older workers an increasingly important part of the labour force, have had a profound effect on the way Member States view their education and training systems. It is no longer appropriate to see education and training as a stage in people's lives, undertaken before they enter the workplace; but, rather, as something which is a life-long enterprise.

The importance of this area was recognised in the designation of 1996 as the 'European Year of Lifelong Learning'; and the concept is recognised and applauded in policy discourse throughout the EU. It must be emphasised, however, that this is an area where it is very difficult to map convergences (or divergences) among Member States with any degree of confidence. A number of recent initiatives, notably the FORCE programme, mean that we are now in possession a much fuller map of EU practice and activity than ever before; but we do not have good time-series data, and definitions and terminology also vary widely among states.

The changing nature of adult participation

A striking characteristic of the last 10 to 20 years, evident in every member state for which trend data are available, is that an increasing proportion of the education and training undergone by adults involves quite specific vocational training. This is true even in societies, such as the Scandinavian ones, which have a long-standing and strong tradition of adult general education.

This change may partly reflect increased levels of general education among the adult population. It certainly reflects government activity over the relevant period. Public support, across the EU, has been largely directed towards strengthening continuing vocational training. There is also evidence of increased expenditure by private companies; partly but by no means entirely in response to government directives and incentives. (Data here are very difficult to interpret with confidence.) This policy reflects the concern of policy makers, and of enterprises, with technological change and global competition; factors whose influence is no less pervasive for being well recognised. Overall, while the policy debate and rhetoric on lifelong learning address personal development and social cohesion as well as economic growth, it is the last of these that has given rise to the most concrete action.

The result has been a shift to a more overtly vocational training pattern for adults. However, it is not so much that general education for adults has declined as that specific vocational training programmes have expanded hugely. This is obviously true for labour market programmes aimed at the unemployed, which have developed in response to Europe's structural unemployment problems. However, even discounting these entirely, and looking at programmes for the employed, the same picture is apparent.

Participation patterns

At present, and over the last five years, Member States show large variations in the absolute proportions of particular groups participating in continuing vocational training. For example, over 40 per cent of Irish workers and over 30 per cent of those in Denmark, France and the UK participate; in Italy, Greece and Portugal, less than 20 per cent do so. Thus, widespread increases in participation have not, so far, resulted in anything that can be identified as a common or even modal participation level.

Some, though by no means all, of these inter-state differences reflect industrial structures. For example, training is offered by almost 90 per cent of financial services companies — but most are concentrated in a small number of member states. Conversely, only 26 per cent of textile firms train; and two-thirds of them are to be found in Italy, Greece, Spain and Portugal. At the same time, there are some very consistent patterns in which groups within a country are most likely or least likely to receive such training. The general rule, throughout the EU, is that the more educated, and those in managerial and professional jobs, are the most likely to receive further training; the least educated and those in low-skilled jobs, the least likely. In the past, it has generally been reported by Member States that women participate less in continuing vocational training than do men; but the most recent data indicate that there is now no significant difference between men and women in participation rates. Training opportunities decline with age. This presumably reflects the fact that both employers and employees see the economic incentives as being reduced because older employees have fewer years left in the labour force. Finally all surveys report that, in every EU state except Denmark, continuing training is much more likely in large firms than in small and medium enterprises.

The available documentation also makes it clear that one cannot realistically talk about a 'system' of continuing vocational training in any member state. In every country, as noted above, the size of the sector has been increasing; but its complexity has been maintained or increased. There are nonetheless enduring differences among countries in the relative importance of different institutions and providers. In some countries universities are heavily involved, and in others not at all. One can also distinguish between those where the organisation of continuing vocational training is primarily government led (e.g. France), primarily social partner led (e.g. Spain), a government/social partner mix (e.g. Germany, the Netherlands), primarily market led (e.g. UK), regionally based and with major regional variation (e.g. Italy).

Although we know relatively little about developing patterns of continuing vocational training, we know still less about the role of lifelong learning in combating exclusion. At a time when we are increasingly aware of the challenge posed to European societies by unemployment, exclusion and the prospect of social polarisation, it is clear that this is an area of enormous importance to Member States, and to the European Commission, in the years ahead.

Conclusion

A detailed survey of developments in the education and training systems of member states confirms the major impact of global forces, shared demographic trends, and common objectives. However, it also confirms that there remain substantial differences in the education and training structures and practices of different states. Parallel trajectories do not lead to convergence, and countries that start with very different structures, even though they respond to common pressures, will often remain very different.

The work described in this report was undertaken at a time when the European Commission's policy focus for education, training and related research is moving towards a new generation of policies and funded programmes, as evidenced by such developments as the publication of Agenda 2000, the signing of the Amsterdam Treaty, the outcome of the Luxembourg Conference, and the early documentation on the Fifth Framework. Emphasis is placed, inter alia, on ensuring that education, training and research programmes play an appropriate role in enlargement, combating unemployment, developing competitiveness, harnessing the full potential of information technologies and developing a more explicitly European level of research.

While historical and cultural factors remain very important, this survey underlines, with particular regard to the systems of vocational education and training, the importance of labour markets in understanding developments over time. The impossibility of explaining education and training developments in isolation is particularly clear in the continuing differences between countries where initial post-compulsory education and training is strongly employment-based and those where it is predominantly school-based. This difference is also related to another remaining and fundamental difference, at lower secondary level, between selective and comprehensive models. Underlying these divides are important differences in the way education and training articulate with labour market and enterprise organisation, a factor that does not seem amenable to rapid change through government action.

2 Historical and cultural approaches to comparative VET-Research

Anja Heikkinen[93]

Introduction

Vocational education and training (VET) has for long been one of the main targets for studying factors having an influence and impact on European social and economic prosperity. In the EU, numerous projects and action programmes have been and are being carried out, including research, surveys and analyses with comparative design.(cf. Bynner 1998, Dietzen&Kuhn 1998). However, one may claim that the outcomes have been rather modest, e.g. in terms of promoting mutual understanding and capacity for innovating practices of VET as well as developing theoretical and methodological concepts for research at a genuine European level.

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The aim of this paper is to discuss reasons for such deficiencies and to highlight aspects of alternative strategies for ensuring a certain progress in constructing international research designs and networks on VET, while taking into account the diverse cultural and historical approaches. More generally its aim is to raise points on options for a Comparative VET research, interpreted not just as a neutral method, but as related to theories, ethics and politics of educational research.

The papers' perspective is based on my practical experiences achieved in co-operation within European networks and projects, which try to develop research and study projects with a comparative perspective. On the other hand, it is motivated by subjective and collective methodological reflections about the needs for and possibilities of comparative VET-Research in Europe.

1. *Something wrong in Comparative VET-Research in Europe?*

In looking at relations between comparative and cultural and historical approaches in VET-research, three disciplinary areas may be of special interest: comparative education, history of education and the emerging area of distinctive VET research[94]. The (general) **comparative education** - initiated and sponsored widely by trans-national organisations - has traditionally been sociological and moved at the macro-level of national states and educational systems, interpreting educational phenomena as functions of economy or of social and cultural reproduction. Vocational education as a specific form of education has received little attention in science and research. As sociologically biased endeavour, comparative education has mainly used history as a 'furnishing material' legitimising cross-national conclusions. The latest movements towards localism and cultural studies seem not have transformed the comparative education mainstream. Considering **history of education** itself, it seems commonly to conceive itself, even more than its mother discipline history, as a national(ist) discipline sui generis. The few attempts to create comparative or cultural research designs in history of education have remained separate and universalist in their character.

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[94] An indicator of the relevance of a 'cultural' approach to VET research, as a cultural embeddedness of academic discussion, is the use of the concepts 'science' and 'research' in different languages and academic cultures. In this paper, I use them in the Finnish way, refering similarly to technical, natural, social, human and educational science and research.

Turning to the **distinctive VET research**, one may while simplifying argue that the majority of European surveys and analyses on vocational education actually do concentrate on contemporary reform discussions or controversies from a a-historical and a-cultural perspective. Their starting points tend to be either taken-for granted external challenges and pressures on VET, or universalised (Western, central-European) economical, (learning) psychological or anthropological theories. The dominating approach to culture and history is indifference and silence. Actually, when 'learning' has become the super-concept for all post-modern discourses on social and human phenomena, a form of 'superhistoricism' has taken over: "an epochal self-consciousness which does nothing except chronicle its own timeliness" (Ree 1991, p. 976, cf. Orthey 1998).

When culture and history are brought into discussion, they mainly have a 'saving' function:

Firstly, they are needed as unexplainable residual categories, when variables selected in surveys do not suffice for understanding or explaining some critical variables. 'Culture' as a subjective, unique meaning, is compensating the deficiencies of generalisations based on quantitative, universal criteria (e.g. Bynner et al 1998).

Secondly, culture enters the picture as an obstacle, when productive and technological transfer programmes meet problems and friction in implementation and applying research-outcomes. This is closely related to conceptions of culture as a threat, representing resistance, irrationality, a non-controllable concept. 'Culture' indicates peoples refusal to understand and conceive things in the way implementers do, e.g. why they should adopt and adjust themselves to certain forms of production or technologies which they neither know nor could anticipate in their contextual impact.

Thirdly, as a modification of such a concept, 'culture' is used as an instrument; like in arguments on 'culture-friendly' shaping of technology, pretending to provide people a 'soft' way to adapt to dominating or colonising technologies (through sensitivity towards local languages, symbols etc.) (e.g. Rauner et al 1997)

The issue of historical and cultural perspective in comparative research on VET in Europe, has also a deeply rooted political dimension. If the specificities of vocational education in 'peripheries' are not receiving due attention, analyses and interpretations tend continuously to be dominated by supra-national criteria deduced from the 'centres' or from 'hegemonic research programmes', which gear research towards an immediate practical and political development of VET, defined from the perspective of the centres. (cf. Levinson et al 1996, Bynner et al 1998, Ree 1996)

However, the desirability and possibility of a 'genuine' international co-operation in comparative VET-research even with a historical and cultural perspective included may be questioned for practical and methodological reasons. Orthodox or fundamentalist (historicist and culturalist) standards may be impossible to meet, e.g. because all involved cannot base and relate their work to authentic and relevant national sources and research traditions (cf. Godthorpe 1991, Ree 1996).

2. *Prospects for comparative VET-Research in Europe*

If we do and should discuss specifically 'comparative research on VET in Europe', the meaning of this expression must be made more explicit. I suggest that there are at least 3 different discourses, which can emerge from breaking down its interrelated components: theories-methodology-practices/policies. We may firstly reflect comparative research primarily from the methodological point of view - as activity using comparative method. Secondly, we may reflect on the specificity of such activity from the perspective of theories of VET, what is the target and topic of comparing. Thirdly, we may question the underlying motivation and aims for comparing, in this context especially the implications of developing comparative research on VET in the context of Europe.

a) Comparative research: the methods discourse

Discussion on comparative research deals with its ontological, epistemological and political assumptions. These may be shortened into questions of **what** and **how** to compare and **why** to compare, leading to reflections on relations of theories, methods and practices in research.

Methodology

how to compare

Theories / ____________ \ **Practices/policies**

what (and why) to compare why and for what to compare

The what and how to compare are interdependent questions: thematising the world as 'vocational education' has consequences for how that world can be approached in order to gain knowledge and understanding. However, this is not separate from why: for exactly which purposes is comparative VET-research needed, for 'being usable', 'serving politics/policy-makers' or for understanding and transforming practices? A consequence from reflection of the what, how and why questions may be that in place of 'comparative' other expressions should be found.

It is characteristic for the self-conception of recent (post-modern) social sciences and research to focus on METHODS, whether quantitative or qualitative, instead of theories in research (cf. Scott&Usher 1996). Accordingly, the issue of 'comparative research' may be reduced to that of using a proper comparative method. Of course, simplifying, comparing can be conceived as a basic intellectual activity: the making of difference in the flux of life. Still, as a research method, comparison implies adoption and acceptance of trans-cultural, trans-national criteria (variables) and assumptions.

Ideal-typically, assumptions on options and acceptability of comparing in social or humanist research, may be classified into three:

1.There exist universal criteria shared by all national (cultural) or educational systems (societies): two types of universalism (e.g. Archer 1988, 1990, Luhmann 1996).

1a) comparing of objective, law-like characteristics in education and educational world (structuralism-functionalism, psychologisism)

* metaphysical realism, positivism, scientism

1b) comparing according to universal value and belief-systems, similar to rational or logical rules of thinking

* requirements for understanding differences: "Unless we can feel confident in the beliefs we ascribe cross-culturally, nothing can be said about their relations. This confidence rests on the convictions that it is possible to produce adequate translations of the alien beliefs." (Archer 1988)

* typical expressions: 'progress', 'backwardness', 'development'

* metaphysical hermeneutics

2. There are different rivalling and competing traditions and frameworks for defining the criteria to be compared: positionality (cf. Mcintyre 1990, Usher 1996, Alcoff&Potter 1993)

* possibility of identifying circulation and impacts of different models, hegemonic developments

* change and continuity in dynamics of rivalry and competition: possibility of 'mutual learning'

* culturally bounded rationalism

3. There are incommensurable systems and worlds of education and social life (e.g. Winch, Rorty, Alcoff&Potter 1993)

* understanding is only possible by participation in 'THE' culture, form of life etc.

* comparison can only mean widening one's participation in mutually exclusive meaning systems

* radical relativism and boundedness of logical, belief and value systems to social and cultural forms of life.

However, I think that suggestions on alternatives like 'collaborative research' as improved versions of comparative methods (perhaps equivalent with the version 2), miss the point (e.g. Attwell 1998). Researchers can collaborate to make a survey, to solve a question, even if they don't do any comparisons. On the other hand, comparisons can be made without collaboration - actually majority of them are made by individual researchers from a certain country's perspective. What is, in my mind, at stake in the discourse of collaboration in research on VET - be it at national or European level - is primarily the relation of research practices to practices and politics of VET. Demands about collaborative research practices challenge the dominating academic research practices and more importantly may blur the relations between researchers and practitioners and policy-makers.

b) VET in comparisons: the 'demarcation', 'concept' discourse

Any attempt to (re-)define 'comparative research' should not ignore that the issues: methods (methodology), practice/politics and theories are all interdependent. What is striking in VET research, is the avoidance and neglect of reflecting THEORIES and CONCEPTS of and on VET. Both methodical and practical approaches are in most cases eclectic or uncritical towards theories and concepts of VET. However, the issue of conceptualisation and modelling of VET is crucial for finding any indicators for quantitative surveys or coding principles for qualitative studies. Similarly, the practical and political relevance of studies depends heavily, if they really bring new understanding and conceptual clarity for making decisions on VET, enabling new conceptual frameworks for different actors in VET. However, in social scientific research theoretical issues and practice are interdependent, because conceptualisation, theories and models are co-constituting the specificity of practice as something, e.g. as VET. Therefore, although practices form the basis and enable theorising, theorising also enables certain practices and their further development.

Actually, most studies on VET lack theoretical and conceptual clarity about what is meant by vocational education both at national and European level: This has contributed to illusory solutions, either by substituting theoretical reflections by political slogans or by a rhetoric on multi-disciplinarity. However, a cumulation of knowledge and development of explanatory models cannot happen and communities of practice cannot grow, unless a certain disciplinary continuity is provided. A disciplinary continuity is crucial for developing any research, not to speak of comparative VET-research. The complexity of the problem is related to the cultural complexity of different VET practices and academic cultures as well as to the mutual relation of the two 'worlds' themselves. Traditions are different in the respect, whether issues of VET have been conceived as economical, sociological or educational. Because these disciplines often define themselves in a way which is rather excluding VET, researchers of and on VET hesitate to identify with any discipline at all.

c) The 'European' discourse: overcoming national problems, or creating new ones at European level?

Reflections on comparative VET research in Europe (or EU), have to question also, what does 'Europe' mean in this context, why should comparisons be made in Europe, i.e. what is specific for it - and these reflections bring inevitably the political aspect of comparative research into the discourse.

The making of Europe as a cohesive and integrated economical, social and political area is a political programme, how varying the underlying commitments may be. EU is one form of trans-nationality, which separates from 'internationalism', an older slogan in educational discourses. However, the social scientific and political vocabularies and conceptions seem to prevail: 'societies', 'cultures', 'economies': educational systems are based on nation states, politics are based on nation states, collective and personal identities are related to nation states. The developing of a 'European Dimension' is an attempt to redefine and re-establish these conceptions as 'European'. Europe (EU) should develop into a multi-cultural area: 'diversity in unity', inhabited by people of multiple identities. This means that the political obligations and functions of VET are increasingly being redefined as mere 'European' ones. If at nation state levels, the primary political function of educational research has become evaluation (accompanying, confirming, correcting, anticipating national reform policies), at EU level these will have to be transformed into European action research, evaluations, expertise etc. substituting national investigations and comparisons out of a national perspective by European ones (cf. Harland 1996).

However, the variety of complexities of Europe as an economic, social, cultural area, means that (political) expectations of raising above the problems evaluative research is facing at nation state level, really could be transcended at European level, may be impossible to fulfil. On the contrary, they may even become more difficult.

In the following, examples of problems in VET research at nation state level are mentioned, which cannot and should not be ignored at European level either.

- instead of co-operation, there mainly prevails national competition among researchers of VET in different camps of - how can such groups construct a 'community of practice' at European level?

- the situation is worsened because of dominating national politics and financing systems, which support competition instead of co-operation. The increase of business-style organisational and management mechanisms side by side of continuing bureaucratic practices does hardly support researchers to co-operate at European level;

- related to former problems, is the increasing polarisation between camps of people, with self-conception of either of pure, real and serious academic researchers or of policy and practice-led accompanying (Begleitungs-) surveyors. There is discrimination on both sides: the exclusive academic research puritans judge EU-projects to be pseudo-research, bubble science and refuse entering into discussion; European project-spiders strengthen their own co-operation, trying to develop their own, alternative interpretation of what science and research means;

- even at national level, policy-makers and practitioners are rarely acquainted with academic disputes and struggles that they would understand, whether they really make proper decisions in promoting research (and research-co-operation). It is questionable, whether they are competent enough to gain the best from the research community, even in terms of short-term practical problem-solving.

Turning to the European level, some examples of problems in developing research on VET may be mentioned, primarily thinking about the actors in the EU-bureaucracy and policy-making.

- the heritage from EC/EU science policy and previous action programmes may not be supportive for approaches needed in promoting VET research;

- the previous conceptions on research policy are dominated by natural sciences and technology, which are well established, universal disciplines and whose strategic application at European level may be relatively easy;
- the fragmented, descriptive and normative action programmes on VET have tended to be related to either 1) straightforward skills demand of core industries and industrial sectors or 2) solving social problems, like unemployment and social exclusion, but hardly created stocks of knowledge or research expertise on VET to build on future actions.

In developing research policies at European level, greater awareness of the cultural and historical specifies of societal, economical, educational phenomena (compared to nature and technology) is essential

- as well, awareness of the different disciplinary status and situation in social, economical, educational sciences and studies should be understood, e.g. they are not paradigmatic and established like natural sciences and technology
- especially understanding of the problematic status of VET research is essential for European level support. When VET is fragmented in various disciplinary fields, has no established 'home' in academic surroundings, is fragmented and non-established, where can effective applied research projects be rooted at European level?

For proceeding in discussions on the promotion of VET research in Europe, tackling the issues of research-practice-relations are essential. The exclusiveness or autonomy of 'the' academic research from practice/policy making is a controversy, which has followed social sciences since their emergence. On one hand, it has been characteristic even for radical movements, which have declared their commitment to democratic practices, to conceive their task as enlightenment, raising the consciousness of the masses, serving the progressive politics. On the other hand, the more short-term and strategic financing of research becomes, increasingly taking place at European level, the less can practitioners and policy-makers really expect to promote and gain the best research. The political preconditioning may undermine the very innovative and creative potential, which even the most 'pure research' could provide for conceiving practice in the long run. Among researchers or disciplinary areas themselves, there seems to be no effort towards collective understanding and mobilisation towards redefining the political and practical function of their work.

A basic prerequisite for developing VET research in Europe is, whether the key discussants can be motivated and brought together.

4. Alternatives for (Comparative) VET-Research in Europe

Although consideration on proceeding in developing research on VET in Europe must take into account lessons from national level, genuinely new views on theory - methodology - practice - compound may have to be produced at European level, which are not reduced to issues of 'comparative research' on VET. My suggestion is that historical and cultural approaches to VET could be most fruitful for developing new perspectives in a co-operative or 'collaborative' way, making linkages between key actors in promotion of ' a community of practice' in VET research in Europe. A preliminary framework for topics for discussion is given below.

Culturally and dimensions of vocational education: researcher's perspective

Theories of culture and vocational education

I

Cultural research on vocational education: methodology — Research(er) on vocational education as a cultural phenomenon (academic cultures!) — Vocational education as a cultural phenomenon: the practice

a) Theory: need of a more fundamental VET-Research

Discussion on the disciplinary basis or status of vocational education research - whether interpreted as educational or other or even as a 'new' disciplinary area - is only possible in line with an increasing development of a basic, conceptual or fundamental VET-Research itself. Analyses and descriptions of the basic entities and phenomena, constitutive concepts and categories, their theoretical contents and relations are necessary and the inclusion of 'cultural and historical perspectives' are essential in this work.

VET as 'education and cultural phenomenon'

There are some attempts to overcome theoretical problems in comparative VET research through a 'sceptical eclecticism', which would compensate statistical surveys on structural indicators of countries by biographical experiential descriptions of VET phenomena (Bynner&Chisholm 1998). The problems of equivalence and incommensurability of variables in trans-national surveys are interpreted as cultural and contextual. Bynner and Chisholm do suggest for instance that the period of considering targets of comparisons as insulated units, following universal, predictable develop-

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mental models and hegemonic commitment to Anglo-American meanings and vocabularies, is changing into specifying common problems and more democratic research-practices. However, instead of claiming for a new kind of theory-formation processes, they remain in their proposals in the 'country-design' and conventional methodical commitments to 'triangulation', preparing glossaries etc.

I assume that some lessons for developing VET research, may be learnt from those countries, where it has at least to some extent established itself as a discipline. It seems that philosophical and historical work on specifying VET has been substantial for this development. Some argue, e.g. K. Harney (1997), even stronger. According to them the contribution of historical research on vocational education is and has to be searched in the specificity of vocational education as a form of educational knowledge embedded in educational science. The specificity of vocational education is based on the occupational form of work/labour itself and the way it constitutes the framework for activities which are oriented towards collective reproduction (or continuity) of capacity for occupational work. The notion of Harney is fruitful: it is the relation of (vocational) educational theory and research to (vocational) educational practice, which makes a historical and comparative approach essential, making VET research different from pure 'foundation discipline approaches' to education: the reproduction (or transformation) of the capacity of occupational work is based on something to be reproduced, in some conceptual, spatial and temporal context, which implies the culturally and historicity of vocational education phenomena.

Peter Vogel (1996) has characterised theoretical and empirical relation between education and socialisation, which has implications also for VET, if it is conceived as a form of education. According to Vogel, educational commitment behind an 'educational approach' in research leads to troubles, because educational phenomena can never be understood exhaustively from 'genuine pedagogical intentions'. The commitment to the 'socialisation approach', on the other hand, by functionalising them, is unable to grasp the educational aspects of personal growth and educational encounters. Still, according to Vogel, the problem cannot be solved by disciplinary division of labour, delegating intentional aspects to 'educational' research and functional aspects to 'socialisation' research. The perspectives of education and socialisation are basically incommensurable and thus cannot contradict: 'educational approach' means always the perspective to educational action (Handlungsperspektive), 'socialisation approach' to observing (or diagnosing?). The categories belong to different epistemological spheres distinguishing educational and sociological sciences or disciplines or argumentation types from each other.

In considerations on VET as a cultural phenomenon philosophical and theoretical discussion are needed on what 'culture' means in the context of 'VET research in Europe'. The limits or borders of culture have to be studied - e.g. as shared humanness and epochal experiences and challenges, as human-made objectifying structures, as forms of human life, as personal identities and unique selves - everything cannot be reduced to 'culture'. The relation of culture to economy, society etc. need further reflection:

CULTURE as static, dynamic and generative

static aspect — dynamic aspect

culture (as structure) <---> * collective identity formation (and materialisation) process

* life-forms I
** persons I * personal identity formation (and materialisation) process

(constant/still culture) (moving, transforming culture)

generative aspect
* life-world, flow of life
(culture in creation)

Culture as a static concept is more like a structure or non-changing, constant order of things (meanings, values, conceptions etc.). Culture as a dynamic concept is the process of becoming, transforming (of meanings, values, conceptions etc.). Culture as a generative concept is creation, it is introduction of new meanings, new values, new conceptions, new processes of becoming of culture. Politically important is the conception of culture as a programme or project, as the making of culture to 'work', to 'function', consisting of contradictions and power.

The other pole in reflections on VET as a cultural phenomenon are discussions on the specificity of VET. These reflections are impossible without some kind of conceptual mapping of basic categories (in the sense of Toulmin), which are essential for making VET an activity. Such mappings - which cannot be reduced to preparing European glossaries, but are essentially related to a cultural and historical contextualisation - should apparently include some of the following categories and their relations:

Suggestions for discussing basic categories of VET

```
WORK (labour)
* varieties of       I
                     SKILLS
                     I
                     DIVISION/INTEGRATION OF LABOUR
                     * segmented work/labour, hierarchies and specialisation,
                     including sex/gender
                     I
TECHNICS/            ---------I
TECHNOLOGY I
                     PRODUCTION - CONSUMPTION (SYSTEM)
                     I
OCCUPATION (varieties of)        --------  OTHER FORMS OF LIFE
* personal, collective, social/global
I-------------------------------------------------------------------------I
                                           I
                              IDENTITY&
                              CULTURE ---- EDUCATION (ethics) - varieties of forms
                              I                I
            OCCUPATIONAL                   VOCATIONAL EDUCATION
            IDENTITY
```

Among basic questions on the specificity of VET are: what is …

- 'work' in relation to other forms of life, the specificity of work as action (e.g. problematising the reduction of VET to activity pedagogy)
- 'occupation' as form of work (or something else) and related to division of work
- 'education' in relation to other forms of life and as an action
- 'identity' as an educational category and
- 'occupational identity' as a VET category.

The previous suggestions are a radical challenge to the European level research policy. There seems to be a priority in EU-supported projects and activities towards immediately applicable research or studies, without much concern of their basing in a certain disciplinary area in VET or its 'foundation' in a 'neighbouring' scientific discipline. It is hoped that a specific strand on 'comparative VET research' at European level could somehow overcome the methodological and theoretical challenges research is facing at national level, where 'comparing' is just exploiting the outcomes and results from previous work.

	VET (education)psychology	(educational) psychology
	VET sociology	(educational) sociology
'applied VET research'	VET philosophy	(educational) philosophy
(comparative VET research)	History of VET	(educational) history
	Economics of VET	(educational) economics
	Didactics/pedagogy in VET	didactics, pedagogy
	Technology in VET	technology
	etc...	etc...
to achieve this ....->	*must there be this*	*..........->related to this*
at European level	*at European level?*	*at European level?*

In the long run, frustrations and disappointments may follow from attempts to create European research on VET only as applied research/study. Developing conceptual and theoretical frameworks on VET at European level needs researchers and projects, which are committed to do more basic, theoretical and methodological work.

b) Methodology. Beside or instead of comparative, a cultural approach to VET

I am suggesting that better than 'comparative', would be a cultural approach to VET and VET-Research building on previous methodological discussions and sensitive towards practical/political challenges while in same time developing a European research community and culture. Methodically, I do not refer by 'cultural' to the mainstream sociological 'cultural studies'. In research practices, the notion of 'cultural' implies a combination of philosophical (speculative) and historical (empirical) reflections - as medium for a dia-logical, non-hegemonic research co-operation and collaboration among European researchers of VET - and confronting them with contemporary practical and political discussions and reforms of VET. Instead of removing the tensions between theory and practice, it hopefully would raise them on a new level by increasing the capacity of actors to discuss these.

Maintaining aspects mentioned above means recognising possibilities of shared, universal, structural layers in culture, accepting differences in conceptual frameworks and limitations for shared understanding. According to its epistemological and ontological starting points, 'cultural research' on VET, may be called relational - not relativist. 'Relationality' implies that systems and worlds of education are co-constituted, and that the positions of 'home' and 'self', 'alien' and 'stranger/other' are no fixed closed categories but under constitution from both sides.

The essential historicity of 'cultural approach' means that systematic reflections on change and continuity, on potential and limitations of expanding, widening, enriching worlds, meaning systems, forms of life, languages, identities etc. are only possible on thorough and committed historical research.

c) Towards a European research community

Is it possible and desirable to aim at developing truly 'European frameworks' or sharing European assumptions in research, do they require a birth of a new type of 'euroscience' and 'euroscientist'?[95]

It is important for researchers and academic communities - just like for other occupations -, to maintain ownership of their work and occupation, i.e. research (cf. Weber 1991). Science and research is simultaneously a personal, local, regional, national, European and global (universal) endeavour. Therefore, should researchers be committed to Europe, why not to their own country, to some other unity or to the world or science or humankind? On the other hand, there may be special challenges for reconceptualising the occupation of a scientist as well as of other occupations in the light of changes of our consciousness, organisation of production-consumption systems and work divisions.

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[95] In academic fields, these labels are informally being used, indicating activity demarcated from what is taken as genuine scientific research, and pragmatisist opportunism.

Another comment on 'euroscientists' is that a perfect harmony and collaboration between researchers/academic communities may not be even desirable. Basically it may be questioned, whether 'European cohesion' is a desirable political and research methodological goal? It is not certain, perhaps not even probable, that academic communities in Europe start by themselves to develop VET as a disciplinary area and as a shared European (or international) activity. Even though the function of EU and its organs may be subsidiary and compensating national action, in the case of developing VET, if it is conceived as politically crucial, some external interference may be needed. If the academic communities are not facing the challenge of vocational education practices, neither at national nor at European level, new conceptions on theory, practice and methodology are not to be expected from their side. It might be useful to discuss some promising and some warning examples from European projects on VET.

From my practical experiences from European (not just EU-funded) efforts to develop VET-research as a scientific discipline including a European dimension, it seems that fruitful ways of proceeding aim at integration of projects and basic academic activities: research, MA and doctoral studies, training of researchers, so that they would 'feed' each other mutually.

projects <------------------>
mutual enrichment
supporting innovative
practices on both sides

* long-term research in institute/university
* MA and doctoral study programmes
* training of researchers

Projects and long-term disciplinary development may share a connective platform for innovations in theory - methodology - practice -relations. Looking at the situation from the perspective of 'project-workers', experiences from less promising projects are rather alarming: researchers repeatedly complain, how they suffer because of not having time and opportunity to do REAL research on topics they feel are REALLY important and essential, because of working in PROJECTS. Once again, a cultural approach to VET, based on dialogical action, may be a good starting point for developing more satisfactory conditions for researchers themselves to create a truly intellectually stimulating, supportive and rewarding community of research in VET. To achieve this, commitment and initiatives also from practitioners and policy-makers are important.

3. *Concluding remarks*

It is easy to repeat slogans on 'multi-disciplinarity', practical and political contribution and relevance, quality and effectiveness of VET research. My conviction is, however, that for several reasons, promoting 'comparative research on VET in Europe' is in fact a complex and methodologically challenging task. If not the underlying conceptions of what is understood with these terms, why are they essential - are they and why somehow endangered, underdeveloped now - they remain superficial and tactical means of mutual exclusion and inclusion of different research areas and activities, researchers and ways of developing theories and theory-practice relations.

The questions of promoting VET research in Europe, be it comparative or not, are not basically and only problems of researchers and academic communities. There are two sides in the research-practice-dialogues and the problems are related to the traditions and paradigms of 'policy making', their characteristic social and political definition processes. As much as new kinds of communities of VET research should be developed, as much new kinds of communities of VET policy-makers and new practices for negotiations between the two communities are needed.

In searching for new methodological solutions to 'comparative research on VET in Europe', we should also develop new conceptualisations of the situation where we stand, new ways of discussing methodology. If one tries to capture the shared, idealistic European heritage in science and research, it may be their role and potential in developing and maintaining democracy. If democracy requires organised opposition and open development of alternatives for the future, while respecting diversity and variety, science and research can be essential as organised challenge and criticism within that context. Research is all in same time: a descriptive, normative, evaluative and critical activity, and we should take care that it does not neglect any of these aspects, which means that tensions between 'theory' and 'practice' are inevitable and necessary.

Taking the actual challenges seriously, it is necessary to question the possibility, desirability and righteousness of comparative historical research on vocational education, even if it were redefined as cultural research described above. In the end, the effort towards common understanding, towards fusion of horizons, is inevitably destroying the separateness. We may call it progress, improvement, but the ethical uncertainty remains. However, the alternative of the popular and expanding conception of multi-culturally, considering cultures as - either traditional or deliberately chosen and created - self-contained, conformist communities, legitimised by much 'post-modern' theorising and communitarian ethics, seems to lead to political and ethical lethargy.

There is much conceptual work to be done, developing another version of 'cultural research', which would, for example, be able to integrate civic and cultural in a way, which is 'going beyond culture'. There has hardly been serious cultural - speculative, historical, dialogical - research on VET at European level: it is a complex, challenging and demanding way to proceed. New forms of negotiation and discussion are needed to create shared awareness and mutual understanding among the key actors in VET: policy makers, VET professionals, pure academic and project researchers of VET. Europe might be the platform for starting something in this direction, giving a constructive example for the rest of the world and academic communities to develop!

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3 Historical and International Comparisons: Employment of Longitudinal Data in Vocational Training Research

Steffen Hillmert

Introduction

Vocational training research - like empirical sociological research as a whole - has adopted the view that many of the pertinent phenomena can only be adequately studied in a wide timeframe to take into account their long-term variability. While official statistics provide mainly *historical* time series, (quantitative and qualitative) investigations have concentrated on *individual* longitudinal perspectives on the basis of random sampling. Studies combining both time perspectives have been rare.

One of the purposes of this article is to cite subject-related arguments for the necessity of placing greater emphasis on the interaction of various time perspectives. Another objective is to present a few simple examples to illustrate the numerical and substantive consequences of employing various measurement concepts. Viewing the issue from this angle highlights the informational value of quantitative retrospective data from surveys that usually cover wide subject-areas for possible international comparisons in the field of vocational training and labour-market integration. The statements in this article concerning institutions and empirical findings relate primarily to the United Kingdom. Since questions of methodology take priority, however, the facts presented here are intended simply as illustrations.

1. *Concepts*

1.1 Relationship of international and historical comparisons

International comparative sociological research attempts to reach conclusions about diverse societies and their subsystems. Characteristics of educational systems, national income distribution, etc. are features of entire societies as subjects of investigation, although the data is initially collected from individuals. Comparing entire societies raises a number of comparability problems (cf. Heidenreich/Schmidt 1991, Mayer 1997; in the area of vocational training research Lauterbach 1995).

Problems already appear at the measurement stage due to the fact that apparently similar concepts have quite different meanings (just consider the broad German term *Beruf* in contrast to more specific English terms: *vocation, occupation, profession*). This illustrates the more profound theoretical problem of measurability with a uniform yardstick and the existence of a common range of possibilities. Even within one society this problem arise in the search for stable categories.

- The measurement premises are possibly already false at the point of defining variables. For example, there is no comparable position in the occupational scheme of the other country.
- Moreover, in comparing two subgroups, their relative position in organisations or in society must be taken into account. For example, members of an occupation in one country may be 'poorly' trained in comparison to counterparts in another country although they are among the most skilled in their homeland.
- Finally, the social 'relevancies' in the respective societal settings may be highly diverse since social systems as a whole are variously configured. For example, employment systems vary in the extent to which central processes such as personnel selection are based on special skills.

Challenges of this nature are met with concepts like these:

- searches for generalisable dimensions and normally simple categories like broad categories of qualifications;
- transfers to (topically/temporally) relational measures at the data level;
- attempts to comprehend processes and modes of operation in one employment system instead of matching selected components.

If one compares aggregates and tries to make statements of causality at this level, one is faced with a difficult requirement for statistical testing of deduced hypotheses: a sufficiently broad-based, reliable sample from a population of observed units (in this case - societies). However, in real-life comparison of societies one usually deals with very few, hand-picked cases. Only deterministic theories could provide a *statistical* basis for their validation. Deductive formulation of laws concerning simple causal relationships are founded on 'diverse but equal' assumptions which are usually not tenable when comparing societies and thus cannot be verified statistically. Generalisability to cover types of societies is nevertheless by no means impossible, but it remains closely tied to theoretical argumentation, and it is very difficult to quantify probabilities of claims. On the other hand, that is not to say that researchers are totally without a clue. Knowledge from experience, extrapolation of trends and similar tools allow them to form more or less certain expectations. On the one hand, the objective is theoretical foundation of reasoning.

On the other hand, however, the problem presents itself in a different light when one bears in mind that social systems are by no means static. Statements about a society or characteristic features of its subsystems can only be made, strictly speaking, with reference to a certain period of relevance. For this reason comparative statements must also be phrased historically, and in internationally oriented research, one always ultimately compares 'historical trajectories' of explanatory factors, particularly of institutional configurations. In addition, non-simultaneous institutional trends enable us to identify partial effects more precisely. It goes without saying that international cross-sectional comparisons do not become irrelevant as a result, but the current observation will focus nevertheless on trends over time as the departure for international comparison. Individual trends will be examined in addition to the analysis of historical change.

1.2 Parallelism of historical and individual measurement problems

The identification of individual 'effects' of different forms of qualification is obviously a closer approximation to reality if one studies entire individual lifetimes instead of classifications of status or separate transitions. When referring to longer sequences in CVs, establishing unambiguous hypotheses from two-country comparisons is tricky because individual careers are contingent on a large number of institutional parameters. Perhaps the already very generalised *Lebenslaufregime* (cf. Lessenich 1995) can provide a useful concept.

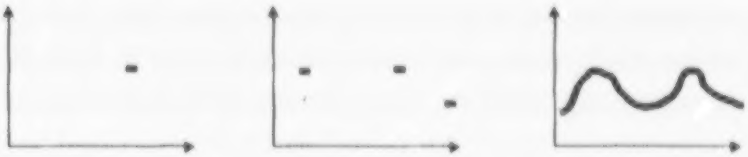
If one takes the approach of combining gross (historical) with individual development instead of concentrating on static categories, an equally difficult problem arises, that of temporally adequate observation of the collective on the one hand, and of the individual on the other.

Simplifying slightly, one can speak of a continuum in characterising the fundamental observation points or time axes. The continuum ranges from a single measurement (a selected point in time) to constant observation (permanent time axis), but for the moment the following classification should be sufficient:

- one-time survey: the normal case of a cross-sectional survey;
- observation at regular intervals. This is the case for example for repeated surveys of a panel;
- virtually continuous observation. A continuous time axis can never be achieved in practice. (The timeframe of the subject is an insurmountable barrier in itself.) However, applying sufficiently short units of time (often months) can furnish an approximation which usually suffices.

While it goes without saying that one-off observation provides no information on change, repeated observation may suggest erroneous conclusions about trends, as the following sketch illustrates: one is inclined to detect a 'linear trend' in the middle graph.

Fig. 1: Single, multiple and continuous observation of an identical variable over time



Real survey instruments often produce such constellations. For this reason large panel surveys use detailed calendars to define the interval between two survey waves. However, various data sources can be classified by their main features (Table 1).

While official statistics usually rely on (cross-sectional) time series, more recent survey data frequently permit individual longitudinal scrutiny. Although, strictly speaking, each piece of information on experience is collected retrospectively, data on events and lives over time merit special attention.

Table 1: Data sources and time reference of measuring concept (examples)

Individual level (curriculum vitae): ----- *Gross level (historical):*	One-time survey	Observation at regular intervals:	Virtually continuous observation:
One-time survey	simple cross-sectional survey	panel design cohort study	calendar/event design cohort study
Observation at regular intervals:	trend study official statistics	panel survey with representative age sampling	calendar/event design with multiple cohorts
Virtually continuous observation:	official statistics		calendar/event design with representative age sampling

The disadvantages of data from random sampling are the subject of a copious body of literature. They will only be mentioned briefly here.

- They are handicapped by varying degrees of sampling selectivity which can be aggravated in the case of multiple surveys over time.

- The voluntary nature of responses and other factors may lead to an increased rate of imprecise or inaccurate answers. Retrospective surveys are particularly susceptible to bias due to recall problems.

- Even with 'major surveys' (standard representative polls) sample size is normally too small to make well-founded statements on subtly differentiated groups - for instance, persons with very specific training paths. Particularly with longer recall periods only relatively little qualitative differentiation is feasible, while retrospective, subjective evaluations are considered unreliable.

However, survey data offer a unique information resource.

- They provide references to a number of further variables, permitting formulation of quantitative 'causal models'. These models are greatly enhanced by information on the timing of changes.
- Information gathered on the not-so-recent past often lacks backup sources of data.

The following example from vocational education research is presented to illustrate how various time perspectives can interrelate and that it is important for statements of causality to link historical and individual continuity over time. We begin with a short glimpse at trends in the British education and training system.

2. *Change in the British qualification system*

The system of education and training in the United Kingdom, which varies from region to region, is characterised by a large number of qualification opportunities and skill levels. Major emphasis is placed on the accumulation of 'qualifications' in terms of the number of examinations passed. The present system of stratification in education and training is not traditional, however. It developed only in the course of the 20th century. Whereas at the outset of the century the classification of schools determined the major distinctions, today they are to a large measure a function of (general) education certificates.

The main developments in the 20th century include: transition from early selection to a widely accepted comprehensive school education and later decisions as well as an expansion in the certification system, which now affects practically the entire school population.

One way this affects labour-market entry is that today employers recruit mainly school leavers and university graduates. In the past they hired school leavers with no formal qualifications and trained them on the job. Despite their comparatively great importance, the certificates are of a rather general nature. They are not related to specific occupations.

Since the 1960s a clear trend to higher qualifications from one birth cohort to the next has been noted. The expansion particularly concerned the secondary level of general education schools, whose leaving certificates are especially important for some sectors of the labour-market - those where no formal vocational training courses exist, above all the service sector.

Training for specific occupations in Britain is usually on the job and closely related to company requirements. However, (part-time) qualification programmes for persons who are already employed are also important. It has been suggested at various times that differences in the vocational training systems, of Germany and Britain for instance, are more a question of numbers. Wagner 1968 considers the quality of vocational training to often be nearly the same, but in Britain the number of (non-academic) vocational traineeships is much lower. This underscores the need to draw conclusions at the overall distribution level.

The qualification gaps in British industry have been the subject of continued comment since the mid-1970s at least. In the 1980s and 1990s the government has attempted to put more emphasis on technical training, partly as part of a market-oriented education reform and partly as an explicit attempt to transplant aspects of the German model. Binding vocational training standards are to be introduced for programmes below the university level. Major policies include:

- Implementation of the Youth Training Scheme (1983, since 1990 Youth Training), a one-to-two-year training programme offered to all unemployed school leavers as a labour-market instrument to combat high rates of youth unemployment.

- Introduction of a system of (General) National Vocational Qualifications (NVQ) - certified qualification modules - in England and Wales since 1986. This corresponds to modular organisation of the vocational training system, even with the most basic as well as specialised knowledge being certified separately and in principle retroactively (NVQ), and general vocational skills taught primarily in school-based training (GNVQ).

Recent indications that these historical changes are matched by trends in individual career patterns are a crucial finding.

A number of quantitative studies have dealt with transition into the labour-market in the United Kingdom (cf. Kerckhoff 1990). However, they are usually limited to small samples, few birth cohorts and short segments of lifespans.

On-the-job training, widespread in the United Kingdom, combined with the general school system, strongly tied to certain age groups, standardises lives to a great extent. (In the case of males the lack of compulsory military service also has a bearing.) The fact that only a modest measure of 'flexibility' is built into the training system manifests itself later, primarily in job hopping.

In addition, one could investigate further social and also subjective qualities of transition processes. Kupka (1993) is one who has pointed out that in Britain, unlike in Germany, vocational training is perceived by individuals and society much less as a separate phase of life, a kind of moratorium. Instead it is seen as an orientation or experimental stage which allows multiple transfers between training and employment. However, the labour-market situation and institutional change suggest diversification of transition paths, particularly since policies like Youth Training may indeed embody internal stratification.

In simple terms, one can say that such a research standpoint can suggest crucial questions, which can be used to illustrate the abovementioned measuring concepts.

- Is there a temporal standardisation in transitional behaviour?
- Has a more or less 'complex' transitional phase between school and permanent employment emerged in Britain?
- Has the importance of formal qualifications for job placement increased?
- Has the focus of this career link changed?

3. *Empirical examples*

British Household Panel Survey (BHPS) data is cited.[1] Changes in employment status are recorded each month. Age distribution at time of survey is representative. From both an individual as well as an historical perspective, the data approximates continuity. However, various simplifications can be made, and their results compared with each other. Thus a similar system of benchmarks can be applied to the analyses and accounts as well as the corresponding sources of data (Table 2).

Table 2: Figures and measurement time concept

Individual level (curriculum vitae): ----- *Gross level (historical):*	One-time survey	Observation at regular intervals:	Virtually continuous observation:
One-time survey			
Observation at regular intervals:			Figs. 4 and 5
Virtually continuous observation:	Figs. 2 and 3 Fig. 6	(Fig. 6)	

3.1 *Employment status among young people and adolescents and transition from training to employment system*

Changes in education, training and employment behaviour are initially depicted in a succinct structure chart, basically a time series of the cross-sectional distribution of employment status, permitting a relatively continuous historical portrayal thanks to monthly reporting.

A fundamental of historical structural comparison with data like those from the BHPS sample is limiting the age distribution since a representative age distribution can only be expected for the time of sampling. In Fig. 2 and Fig. 3 a 'time' window was selected which always includes those persons who are aged between 16 and 21 in the reference month. Although this focus does not allow any individual longitudinal interpretation, it does provide an outline of historical changes in 'volume of activity' of this age group. Annual cycles were intentionally left unsmoothed to show the substantial dynamics in the subgroup size figures within a single year category.

Fig. 2

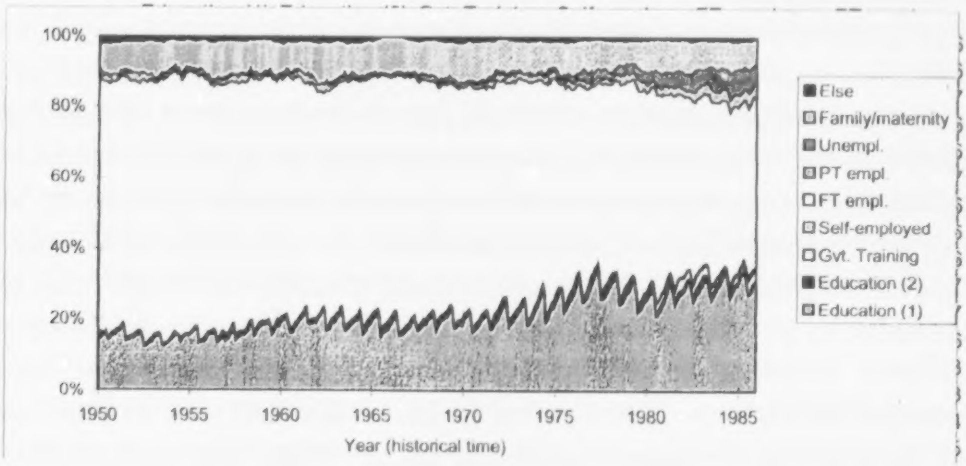
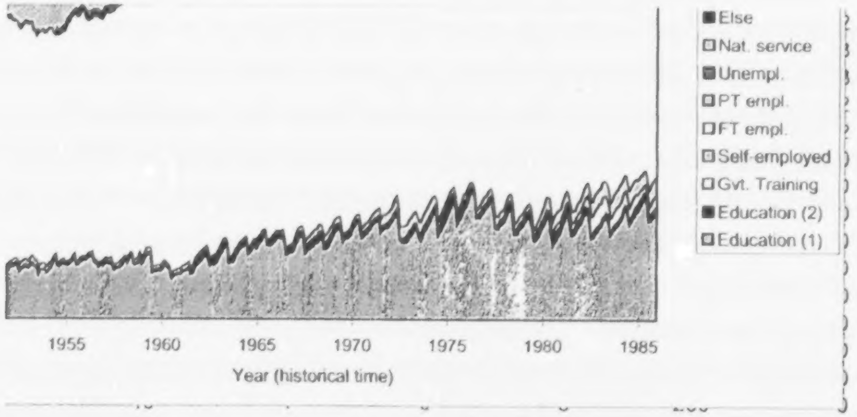


Fig. 3



An initial crude depiction of movement is achieved when one differentiates between the full-time training status (here unspecified) under 'Training Before Labour-market

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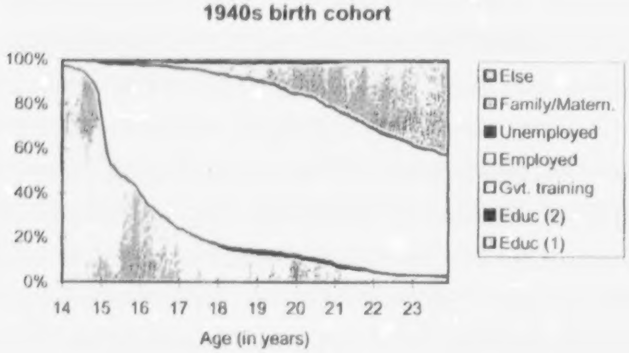
Entry' (given here as *Education (1)* and *Education (2)*, indicating return to training. The latter plays a minor role as far as group size is concerned.

The numerical significance of the school and full-time vocational training population (lower dark area) has increased since the 1950s. Nevertheless, full-time employment (light area) remains the longest full-time 'occupation' of both young men and young women. The percentage of women preoccupied by family commitments changes relatively little. Government training programmes appear as expected in the early 1980s, when they were introduced on a large scale.

This type of graph essentially allows for precise historical observation, but it does not permit individual longitudinal interpretation. Presentation of data by birth cohort is a different matter. In Fig. 4 and Fig. 5 ten birth years - 1935-44 (1940s cohort), etc. - are grouped together. The time axis is now the age of individuals, and it encompasses the 10-year period between the 14th and 24th birthday. Here again we first see a series of cross-sectional distributions which makes no statement on the rate of turnover in the separate (occupational) categories. The occupational distribution of persons of the appropriate age is plotted on a monthly basis.

Fig. 4



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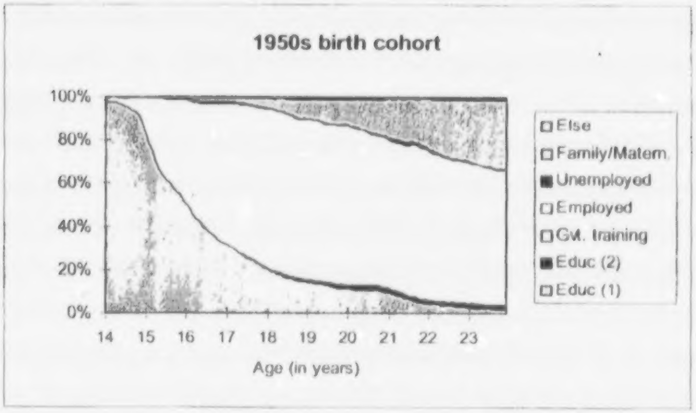
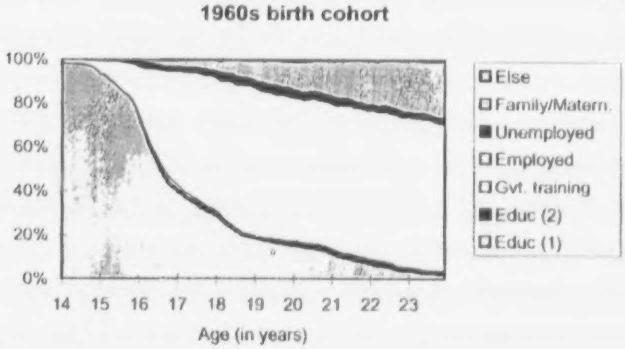

1950s birth cohort


1960s birth cohort

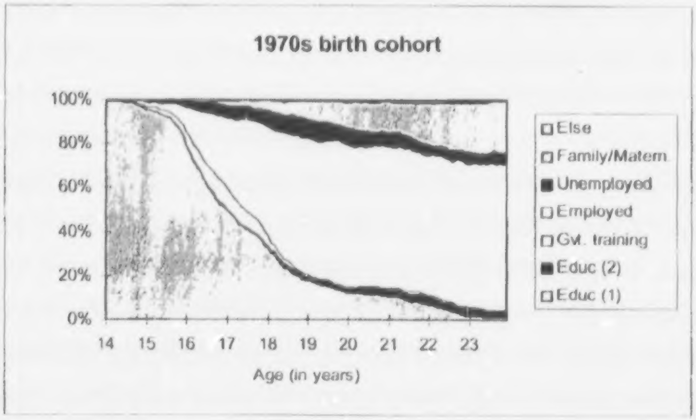
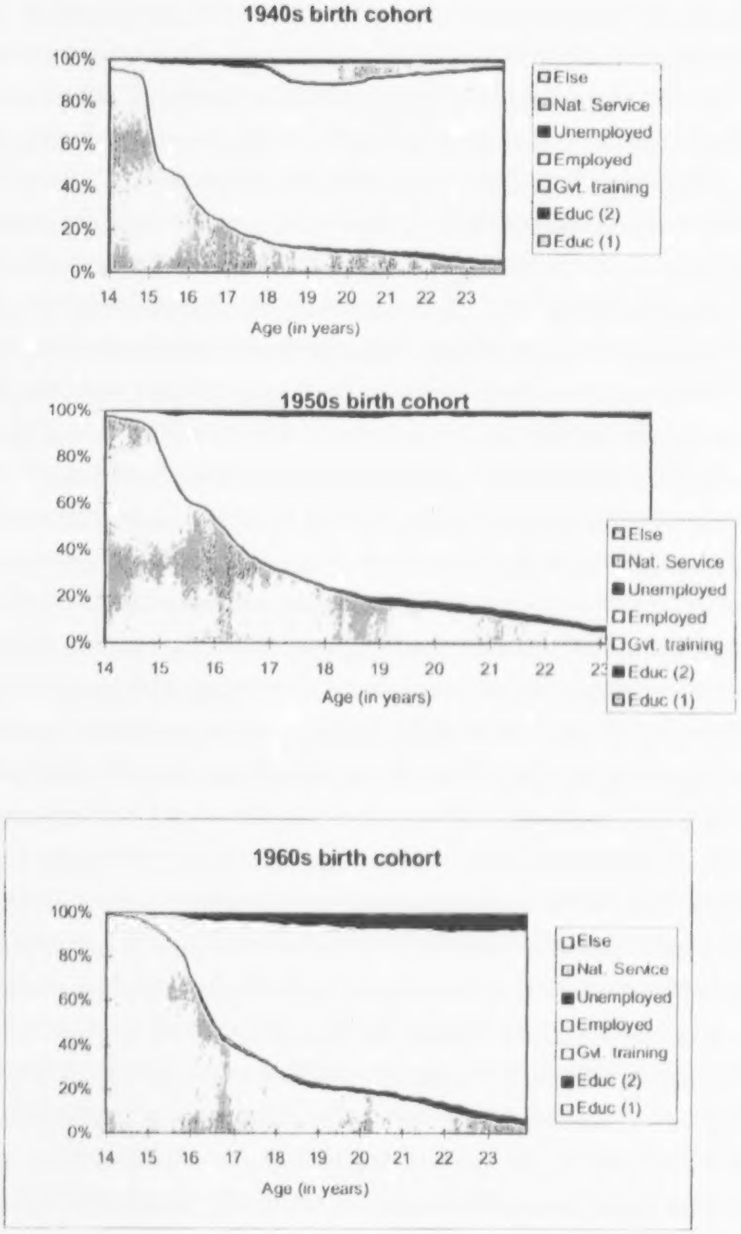

1970s birth cohort

Fig. 5



1940s birth cohort
100%
80%
60%
40%
20%
0%
14
15
16
17
18
19
20
21
22
23
Age (in years)
Else
Nat. Service
Unemployed
Employed
Gvt. training
Educ (2)
Educ (1)
1950s birth cohort
100%
80%
60%
40%
20%
0%
14
15
16
17
18
19
20
21
22
23
Age (in years)
Else
Nat. Service
Unemployed
Employed
Gvt. training
Educ (2)
Educ (1)
1960s birth cohort
100%
80%
60%
40%
20%
0%
14
15
16
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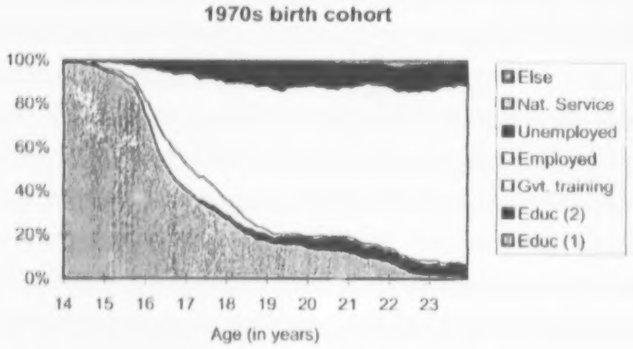
Age (in years)
Else
Nat. Service
Unemployed
Employed
Gvt. training
Educ (2)
Educ (1)


1970s birth cohort

However, one can define certain events as unrepeatable. Since no graded observations occur, breakdown into 'still in full-time education' and 'return to full-time education' enables us to interpret the demarcation line between *Education (1)* and *Education (2)* as a survivor function for the first departure from the educational system, thus as an individual longitudinal variable. It shifts outwardly across cohorts and thus represents longer duration of education.[2] The survivor function tends to become steeper so that one can speak of standardisation, at least as far as shorter durations are concerned.

Complex career patterns are not discernible on such simple graphs. Types of transition can be pre-specified to define units of investigation (cf. Brynner/Roberts 1991) or determined empirically. Possibilities include classification of sequence patterns, time-related event analyses and combinations of the two.

In anticipation of more complex models, summary indices of working status statistics can be calculated. What percentage of a defined period of time is spent cumulatively in certain statuses? The importance of certain working statuses may only be ascertainable in the accumulation of relatively short episodes in the course of a lifetime. The appropriate indicator only highlights high-risk tracks (long-term unemployment) in a few cases. However, consider the issue of underestimating spells of joblessness in retrospective surveys (see a summary in Dex 1991). Apart from the expected very uneven participation in education and training, statistics for females reveal clear differences in employment patterns as a function of type of training.

4. *Biographical impact of training and qualifications*

An important issue in the contents of international comparisons is the assessment of the role of formal qualifications in occupational placement in each employment system. Literature on the subject generally makes the assumption that this relationship is relatively weak in Britain because qualifications are often very non-specialised.

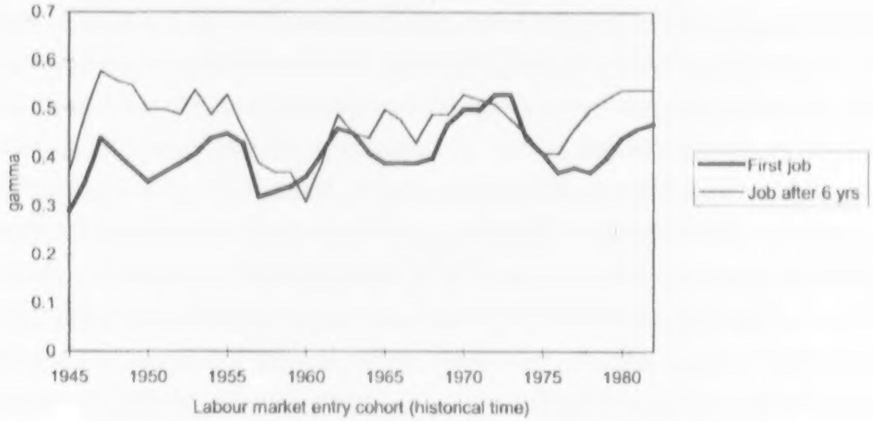
The goal of the following analyses is to find whether and to what degree such outcomes depend on the sample and design of measuring instruments. Cambridge Scale measurement of the status of jobs held is considered to be a questionable yardstick in several respects (cf. Prandy 1990). The scale is based on statements concerning social interaction relationships. Preliminary analysis suggests that:

- on the one hand, the level of the highest qualification so defined at one or more checkpoints in an individual employment biography depends on whether it was one's first job, a job with a certain length of tenure or a timeframe-related measure, also indicating course consistency, and is used in calculating the correlation. Despite distinct differences on the first job, the highly qualified are able to increase their occupational-status advantage considerably in the first few years after entering the labour-market, while the average unskilled worker loses ground. Any upward mobility of the first group is quite an achievement in itself: gaining a few percentage points is a relatively 'tough test' since many of the more highly qualified are already at the upper end of the scale.
- on the other hand, these differences have apparently increased in significance even for selected cohorts since World War II. If these findings are confirmed, they would provide evidence for an increasingly differentiated importance of formal qualifications in the British employment system.

It may be, however, as illustrated above, that we are dealing with spurious indications of a trend. This becomes clear when one attempts to make historical, continuous calculations with the same data-set. The basis is the relationship between the highest qualification, measured on a simple ordinal scale, and job status.

First we look at the thicker of the two lines in Fig. 6. It plots the relationship (measured with the Goodman & Kruskals' gamma) between top qualification and occupational status on the basis of first job across historical time. The time axis consists of labour-market entry cohorts, sliding on a five-year basis. No clear trend can be discerned although one might have been perceived by focusing on a selection of observation points.

Fig. 6



Finally, viewed together, the two curves in Fig. 6 show a simple combination of an historically continuous trend and, individually, a multiple observation of individuals and therefore a change in 'career dependence' across historical time. This is illustrated by two measures of correlation, thus on the gross level. The thinner line also shows the relationship between qualification and status - in this case six years after entering the labour-market. This point of time is basically arbitrarily chosen, but it is intended to measure the position after an orientation phase. Since the simplification of an uninterrupted status trajectory is assumed, only male careers are taken into consideration. These data reveal a considerably higher degree of continuity. If we dispense with methods of statistical inference, we might imagine the following rough division in three phases: distance between the two variables in the immediate postwar period, considerable convergence during the 1960s and renewed divergence since the mid-1970s.

Thus the historical longitudinal perspective combined with multiple observation of individuals leads to the conclusion that the evolution of the 'importance' of formal qualifications apparently must be described more subtly than with a single-function trend.

Descriptive treatment apparently does not suffice for more specific conclusions. Simplification in terms of analytical modelling is more suitable.

While the status of different groups of qualifications are *per se* enlightening in comparing entire distributions, i.e. whole qualification systems, a number of additional variables must be controlled to evaluate the 'effect' of certain qualifications. Moreover, it is necessary to delve deeper into the varying patterns in the distribution, more sophisticated explanatory variables - cf. data on educational background (chronological order) - and the way of dealing with periods of absence from the work-force.

5 *Conclusions*

The purpose of this article was to demonstrate the close link between international and historical comparisons in the area of vocational training and labour-market research. Individual life histories and gross (historical) longitudinal perspectives should be combined as necessary.

The two approaches involve partially equivalent sampling requirements. While retrospective surveys continue to provide an essential source of information, official statistics must be scrutinised to determine if they meet these requirements, and better harmonisation of various sources of data is desirable. Equilibration of curriculum vitae details from retrospective surveys and group size data from total-population records generally requires age breakdowns.

In designing comparative international research, methodologists face the substantial problem of *longitudinal comparability* in addition to conventional (cross-sectional) comparability issues. This involves the stability of categories over time and the equivalence of measuring timepoints.

Notes

The data was originally collected by the ESRC Research Centre on Micro-social Change at the University of Essex and supplied by the Data Archive. The BHPS was conceived as an annual survey of adult members (i.e. ages 16 and up) of approximately 5000 households, a nearly representative sample of the United Kingdom as far as the survey region is concerned. The respondents were interviewed annually. Replacements joined the panel (cf. Taylor 1996, p. A2-1). Whereas pure panel design data - admittedly a copious body - are only available on 1990s trends, the BHPS also provides modules which cover entire biographies to date. In addition to information from the 5 waves measured annually since 1991, particularly relevant retrospective data on employment history is collected on a monthly basis. The evaluations presented here primarily utilise the retrospective partial records *BLIFEMST* on employment status (Wave 2) and *CLIFEJOB* on job spells (Wave 3) in a curriculum vitae. One shortcoming of the BHPS data is that no differentiated education and training backgrounds were obtained, only attained qualifications and phases of full-time training following labour-market entry. Plausibility considerations do at least enable investigators to assume certain sequences of events in acquisition of qualifications. However, no timeframe-related sequence can be profiled.

Closer combination of historical and individual longitudinal perspectives would hardly be enlightening with such simple graphs. One graph - not included here - differentiates more finely between birth cohorts. It suggests that this trend has made two jumps corresponding to changes in the duration of compulsory education.

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4. Does strategic behaviour play a part in the demand for education? The problems raised by continued education on completion of a BTS or DUT course in France or a two Year college course in the United States

Bénédicte Gendron

Introduction

Although G.S. Becker's theory (1964) of the accumulation of human capital has successfully contributed to the analysis of individual choice as regards investment in education, in a context of under-employment this approach does not seem sufficient on its own to explain the huge increase in the number of diploma holders and, in particular, the boom in continued education.

In an environment marked by uncertainty about future income or career openings, the model for the human capital theory points to a fall in the rate of return on university diplomas. As a result, in the current context of dwindling career prospects and rationing of employment, "some young graduates ought to have been discouraged and turned to the labour market" (Lévy-Garboua, 1979). These predictions have not, however, been borne out in practice. On the contrary, the number of students continuing their education has risen sharply.

Against this background, and without calling into question the substantial contribution made by Becker's individualistic approach to human capital investment, the demand for education, in a context of job rationing, should be seen as the result of strategic decisions rather than simply individual decisions to allocate resources in ways that are in keeping with the objectives pursued. In France, students who continue their education on completion of the short cycles of "final" higher education, such as the cycles preparing them for the BTS (*Brevet de Techniciens Supérieurs* - vocational training certificate for technicians) and the DUT (*Diplôme Universitaire de Technologie* - university technical diploma), are exhibiting behaviour of this type, combining a training strategy and/or an employability strategy that both minimises risks (of failing a university course) and maximises competitive advantages (through, among other things, the value added of the technical skills imparted by these training courses that help the candidate to stand out on the job market from other candidates competing for jobs who do not possess these characteristics). This strategy-based approach explains why there has been such a sharp rise in continued education. Working from this standpoint, and looking at the problem in terms of sequential decision-making, we attempted, in a thesis, to find out why so many students continue their education on completion of a BTS or DUT course (Gendron, 1997a).

The aims of the current presentation are necessarily more modest. This paper simply sets out to describe the issues involved and methods used in our attempt to highlight the problems that led to this research into continued education on completion of a particular level of training, i.e. that of the short technical training courses in the French higher education system, and the benefits of a similar investigation into the two-year courses of the Community Colleges in the United States of America, while at the same time emphasising the limitations of such a project.

This paper therefore attempts to explain, based on certain observations and the principal findings of our initial research into the situation in France (Part I), the reasons for our investigation of the two-year college courses in the United States (Part II).

1. Higher education training courses leading to the BTS and DUT in France: from final training to foundation courses for first year university students

The Problems: The Demand for Education from Students continuing their Education: "Sinple" allocation of Resources or Strategic behaviour?

Definition and findings: short vocational training courses which tend to become training sequences or stages in the training process

At opposite ends of the range of initial training offered under the French higher education system there are "open" cycles leading to the lengthy and general education, for instance those offered by universities, and cycles that are "closed", in other words selective and short, such as the technical education cycles that offer short final training courses preparing people for working life in two years.

The training courses leading to the *Brevet de Techniciens Supérieurs* (BTS) and the *Diplôme Universitaire de Technologie* (DUT) belong to this latter category. BTS training, set up in 1959, and DUT training, created in 1966, have many characteristics in common, including student recruitment methods and their purpose: to train "higher" technicians in two years, following the baccalauréat, for positions "technical in nature - located between technicians and engineers[96] - in production, applied research and the services"[97].

Created after the *sections de techniciens supérieurs* (STS - senior-technician departments), the *instituts universitaires de technologie* (IUT - university technology institutes) had a threefold objective at the outset: to reform the education of senior technicians, which was felt to be too specific; to attempt to meet the increasing demand for education; and, to reduce the number of university failures. It was expected that the IUT cycles would, over time, progressively replace the STS cycles. In fact, these two cycles have developed alongside one another, and have been in great demand for around ten years. They account for some 35% of students.

Whilst the enthusiasm for these cycles reflects the success of these training schemes, the increasing number of students who continue their education[98] after they have completed these courses calls into question their final vocational nature and offers food for thought. Indeed, the numbers going on to further studies (1980 figures: 25% of DUT holders and 16% of BTS holders) have continued to rise. According to data from CEREQ (*Centre d'Etudes et de Recherches sur les Qualifications* - Centre for study of and research into qualifications) the figures for IUT diploma holders going on to further studies were 38% in 1984, 45% in 1988 and 63% in 1992. The same trend can be seen for BTS holders, for whom the figures for the same years were 16%, 22% and 25%, rising to 39% in 1992. Alongside their purpose as final vocational training schemes, these schemes are also being used as a springboard for continued education and being transformed into *pseudo*-DEUGs (*Diplôme d'Etudes Universitaires Générales* - diploma of general university studies[99]), or into sequences of training geared towards higher levels of education, thus diverting some of these schemes from their original vocation.

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[96] La formation des techniciens supérieurs [The training of 'higher' technicians], Ministry of Education, SEIS, *Informations rapides*, no. 14, 28 May 1973.

[97] Decree no. 66.27 of 7 January 1966 establishing the university institutes of technology.

The problem: from a training strategy to an employability strategy

While the selection procedures and the restricted intake of the short cycles leading to the BTS or DUT go some way towards explaining why some students are electing, by default or lack of choice, to pursue lengthy periods of study at universities in France, how, on the other hand, are we to explain the fact that students who have opted for the short cycles on offer in IUTs or STSs then take their studies further? What is it that motivates these students to continue their studies on completion of these training courses that were designed to be "final"?

Why do these diploma holders revise their original choice? Are they, in fact, revising their original choice, or had they already intended to continue their studies before they began their training? In the current context of huge increases in the number of diploma holders, of job rationing and of dwindling career prospects, is it not the case that there is a strategic approach underlying these choices, given that large numbers of students still wish to follow these training courses? Are these courses being diverted from their original purpose, and how can this be explained? We attempted to analyse this in a thesis (Gendron, 1997a) from the point of view of "strategy" and "sequential decision-making". In this paper, we shall simply review the main findings and the considerations to which this analysis gave rise and which prompted us to investigate the two-year colleges in the United States.

In addition to the strategic use of these training courses as *pseudo*- or *crypto*-DEUGs, the education demand from students continuing their education is more likely to be the result of a strategic choice of "employability" justified, in a context of job ration-

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[98] When the IUT cycles were created, the rate of continuation of studies envisaged by the legislation was of the order of 5 to 10% and was expected to relate to students who had made "incorrect" choices.

[99] Diploma qualifying students to go on to final honours level at university.

ing and the impenetrability of some occupations in the employment system, by strong competition on the labour market, than of a simple choice to allocate resources in ways that are in keeping with the objectives pursued, which are motivated by a concern for profitability comparable to that of a financial investment. The hypothesis that we therefore put forward in our thesis is that the education demand from students continuing their education is shaped by strategic behaviour, and it is this theory that we shall develop and attempt to confirm in the following descriptive summary.

Methods: from the legitimacy of the concept of a "strategy" to its empirical verification

We need to begin by considering whether the education demand from students continuing their education can be explained in "strategic" terms, from a conceptual point of view. We shall go on to test whether factual data bear out this hypothesis.

Is it legitimate to perceive behaviour with regard to continued education as a "strategy"?

We must begin by considering whether, from a conceptual point of view, the education demand from students continuing their education can be perceived as a "strategy". To this end, we investigated whether behaviour as regards the continuation of education fulfilled the criteria characterising a "strategy". We followed the approach adopted by Paulré (1993) in distinguishing a "strategy" from a "simple choice". According to the author, a strategy has to fulfil two criteria: "Otherness" defined as *"an action differing from that of other entities"* and "Combination", defined as those *"methods and practices that need to be combined, to be made coherent and that therefore need to be ranked and ordered in sequences or programmes"*.

As we shall now see, the behavioural patterns shown by students who continue their education display these two characteristics (for details of these developments, see Gendron, 1997a). "Otherness" manifests itself in students' attempts to "survive" in the higher education system by using these selective cycles of final vocationally-oriented training as *pseudo-* or *crypto-*DEUGs and by prolonging their education after emerging from these cycles.

Students may use these selective training cycles as a first stage of training within higher education because they have higher teaching staff ratios and higher success rates (resulting from the selection procedures used for admission) than universities, thus countering or reducing the potential risk of failure during the initial stages of university courses or in preparing for the DEUG.

These attempts to survive in the education system are also reflected by the possibility that continued studies offer[100] to revise training choices at the end of this first stage if the objectives that this training "should"[101] meet, in terms of actual employment and/or of career prospects, prove not to have been achieved. "Otherness", in this more specific case calling for an interdependence of awareness, is, for our purposes, perceived by students through their awareness of the actions of "Others" (also accumulating human capital) who are seen as "Competitors" likely to reduce their opportunities for success in the labour market. This awareness on the part of students of "Others" surrounding them as "Competitors" or "Adversaries" on the labour market can thus be summarised as an awareness of "Others", perceived overall, competing with them in their "search" for jobs on the labour market. The result of this is that students revise their original choices of training: i.e. they continue their education.

This interdependence of awareness and the "strategic uncertainty"[102] that it generates thus leads students to react to the action of "Others" by combining training sequences - by continuing their education - in order to make themselves distinct or to challenge the Adversary or the aggregated Competitor in the "search" for jobs on the labour market.

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[100] As already mentioned, while the legislation envisaged that some students would continue their studies after a DUT, it was expected that this would involve only 5 to 10% of students who had made an "incorrect" choice.

[101] From the students' point of view.

[102] Orléan (1994). The uncertainty that every player faces does not just come from the "randomness" of nature: it is also caused by the "Other" player, since each person's effectiveness is dependent on the choices made by others. That is why Orléan speaks of "strategic uncertainty": *"in a game-playing situation, the individual's choice is crucially dependent on the way in which he anticipates the play that the other will make"*.

The hypotheses to be tested

Empirical verification of strategic behaviour: from surveys to national data

If behaviour involving continued education can be perceived as a strategy from a conceptual point of view, we now need to test its validity from an empirical point of view. Let us suppose that the education demand from students continuing their education, specifically on completion of BTS and DUT training courses, is based on strategic behaviour. Since this strategy makes it possible to revise choices, in other words allows for sequential decision-making, behavioural patterns of this type also make it possible to reduce the number of uncertainties.

By proceeding in stages, students will be able, on the one hand, to minimise their risks of failure during the initial stages of higher education by using these short, selective training courses as *pseudo-* or *crypto-*DEUGs.

Students will, moreover, be able to reduce uncertainties arising from indecision about their career plans at the point when they chose their orientation on completion of the baccalauréat, by revising their original choice on completion of this first stage of training; in other words, by "laying out their own path as they go".

Similarly, they can also try to alleviate their uncertainty about the job prospects connected with the labour-market situation and thus their fear of competition from other diploma holders - "Otherness" - at the end of their training or along their career path, by revising their original choices on completion of this short training. In revising their choice, among other things they will be able to (re)consign - to take up the "ladder" metaphor used by Jarousse and Mingat (1985) - perceived competition to "another ladder" or another "rung" of the ladder, by acquiring experience or a diploma in the case of continued education on completion of a BTS or DUT.

Empirical verification: data and processing

According to monographs[103] on students continuing their studies via *Formation Complémentaire d'Initiative Locale* (FCIL - local initiatives for complementary training) (Gendron, 1995, 1997), the first two uncertainties mentioned above are the principal reasons for continuing studies. While there are no national data available to confirm these first two uncertainties, the third type of uncertainty can be confirmed from data from surveys carried out by CEREQ (*Centre d'Etudes et de Recherches sur les Qualifications* - Centre for study of and research into qualifications). These data can be used to assess whether the demand for education is due more to a simple choice to allocate resources in an optimum way, in keeping with objectives pursued and shaped by a concern for profitability comparable with that of a financial investment, or rather to a strategic choice justified, in a context of job rationing or the impenetrability of some occupations in the employment system, by strong competition on the labour market. In other words, we need to consider whether decisions to continue education are chiefly motivated by a concern for a return on investment, i.e. the lure of profit, or more precisely by the additional profit that could be gained from further training (perceived, among other things, in terms of higher earnings), or if it the case that these choices to continue education can be explained by tensions on the labour market resulting from huge increases in the number of diploma holders in a context of job rationing and the impenetrability of some occupations in the employment system, in other words career advancement problems.

To this end, on the basis of longitudinal data from CEREQ, we have attempted to identify, with the aid of logistical regression models, those factors that determine why those holding diplomas from IUTs and STSs in particular continue their studies (for details of the results, reference should be made to Gendron, 1998, in the bibliography). We based our analysis on the survey carried out by CEREQ's EVA Observatory (*Entrées dans la Vie Active* - points of entry to working life) of paths followed by those who obtained higher-education diplomas in 1988, interviewed in March 1991. Our analysis is also restricted solely to holders of IUT and STS[104] diplomas.

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[103] Since there has been no national survey of the aspirations of students on BTS and DUT training courses, we carried out surveys relating to a specific type of continued studies, FCILs. The results do not therefore make any claim to be exhaustive. For details of these training courses, consult the articles listed in the bibliography.

Model variables

Among the variables that may explain the factors determining why education is continued, we included, in our logistical regression models, variables connected with students' identifying particulars and other variables connected with the financial and social environment (tensions on the job market and job characteristics). From the statistical point of view, some variables required specific processing, such as recoding (see annex for details), and other variables were added to the models (by data inference).

The individual identifying variables included are the age at which the BTS or DUT was obtained, family situation, situation with regard to military service for men, parents' particulars, baccalauréat stream, academic field of higher education, training cycle and training specialisation (BTS or DUT and industrial or service specialism). Depending on the extent of their impact, these variables make it possible to put forward particular profiles for continued education.

Variables expressing tensions on the labour market, that reflect competition for jobs on the labour market and for positions within the employment system in terms of career advancement, also play a part, as explained in the first part of this paper, in encouraging students to continue or discontinue their studies. One theory that could realistically be put forward is that students balance what has happened to students who qualified earlier and have entered working life against the image and expectations that they have of their future adult life. Thus, in considering holders of BTSs or DUTs from earlier courses who have gone on to the labour market, reflecting the state of the labour market and thus the state of competition on the market (by data inference), students may expect to improve their employability by continuing their education. This leads to the hypothesis, therefore, that in the course of their last year of training, BTS or DUT students will obtain information about the jobs available on the labour market at their training level (level III jobs) and about labour market entry methods and career prospects from their colleagues who have already qualified (what we discussed, in the first part of this paper, using the expressions "fear of competition from others", and "aggregated competitor in the search for jobs").

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[104] For details of the survey, consult the following references in the bibliography: Gendron 1997, 1998.

With regard to the variables relating to the "characteristics of the job held", and still in the context of the idea of perception of competition on the market, students are not unconcerned about the time it will take to obtain their first job or the unemployment rate among those who complete this training, based on the experience of colleagues who have already qualified. A further hypothesis is that they will pay particular attention to the status of the first job held (permanent employment, temporary employment, etc.), to the wage or salary paid by the first job and how the job evolves and, in particular, to opportunities for progression to management posts after a few years' experience in the post. We therefore assumed that all the variables mentioned above have an influence on the decision to "continue one's education in different cycles" (which is the variable to be explained).

Data processing

The data for the two cycles (BTS and DUT) were processed separately, in order to check whether the many similarities between the two cycles also extended to behaviour in respect of continued education. The analysis and processing work carried out distinguished between men and women, in order to allow for the significant impact of military service.

In addition, we inferred some information about the career integration of diploma holders who had qualified in previous years from CEREQ's earlier survey on holders of higher-education diplomas, based on interviews in 1987 of those who had obtained a DUT or BTS in 1984. For this section of the population, we calculated the indicators for labour market tension and career progression after 33 months (time taken to obtain employment, earnings, unemployment rate, management jobs ratio, etc.), by cycle, specialism, gender and regional education authority. Finally, we assumed that these data would be known and available to diploma holders with the same profile who qualified in 1988, and hypothesised that this information would have helped them to decide whether or not to continue their education.

Results, Conclusions and Comments

Some key results

Logistical regression models (see annexed tables) made it possible to show different profiles of reasons for continuing education, depending, on the one hand, on the identifying particulars of diploma holders and, on the other hand, on their perception of tensions on the labour market and their view of competition within the employment system itself, especially as regards career advancement prospects.

The impact of students' identifying particulars

These models showed that those who elect to continue their education were, on the one hand, young, unmarried diploma holders who had suffered no setbacks in their previous experience of education, had had no breaks, whether for personal reasons or for military service in the case of men, and came from a comfortable social background.

On the other hand, the tendency to continue on to further education was more marked among baccalauréat holders with a background of general education than among those who had received a technical education. This showed the impact of the selection procedures used for admission to these cycles on whether or not education is continued. It highlighted indirectly the extent to which continued education was shaped by the proportion of students with a general education baccalauréat entering these cycles, given that they had more of a tendency to continue their studies than baccalauréat holders with a technical education background. This also explained, moreover, the higher numbers of students continuing their education in the DUT cycles than in the BTS cycles, since general education baccalauréat holders were more numerous in DUTs than in BTSs.

The impact of information about labour market tensions and job characteristics on the continuation of studies

While the identifying variables went some way towards explaining why students continued their education, we needed, at this point to check, with reference to our initial hypothesis, the impact of labour market tensions on decisions to go on to further studies, as compared with the impact of financial motivations reflected, among others things, in the "earnings" variable.

Whatever labour market tension variable was examined, holders of diplomas from IUTs and STSs seemed to have taken account of the conditions surrounding entry into working life and of career advancement prospects in their decisions to go on to further education on completion of their training. Earnings-related reasons, which may be an element of this, were also used to justify their decision to continue to study, but to a lesser extent.

With regard to the risk of a failure to build on accumulated human capital, more students tended to continue their education when the proportion of diploma holders from earlier courses who were still unemployed was high. This applied to both cycles and both sexes, except for women with a BTS.

In addition, men appeared to be even more sensitive to indicators relating to the long term (ratio of stable employment, type of job held, etc.) than to short-term indicators, while women's decisions to continue their education appeared to be based on indicators linked to the first job or, more generally, indicators relating more to the short term (wage paid, time taken to obtain first job, etc.). The short-term and long-term indicators relating respectively to the perception of competition on the labour market and the perception of competition within the employment system, from the point of view of career advancement, were perceived differently by men in the different cycles. Thus, men with a BTS diploma tended to be extremely sensitive to the risk of precarious employment, while their university equivalents, with DUT diplomas, while not unaware of the risk of precariousness, attached particular importance to career advancement to management posts and, to a lesser extent, to salary levels.

The difference was more marked among women, for whom labour market tensions appeared to motivate their decision to continue their education more strongly than job characteristics. This was true, for instance, of women with a BTS, for whom the total average duration of unemployment was an extremely important indicator. In addition, in the case of women with a DUT, the risk of unemployment on completion of their training was a major factor in their decision to continue their education.

Finally, with regard to financial motivation, based on the earnings variable, in both cycles these played a positive part in decisions to continue education, but to a lesser extent: perception of the "advisability" of building on human capital (i.e. employability) coming ahead of the perception of the "price" of building on this capital.

Conclusions: the effects on continued education of the admission selection procedure and of competition on the labour market and within the employment system

This analysis produced two main results. Firstly, the admission selection procedure for these cycles means that students with good educational results capable of embarking on lengthy studies are recruited; on completing their two-year course, these students are therefore more likely and more willing to go on to further studies than are students from an open recruitment procedure.

Secondly, continued education practices can only be assessed in terms of a strategy in a context of job rationing and competition on the labour market and within the employment system, in which employability is ranked as a primary objective, rather than the early maximisation of gains in a context of perfect information and certainty of obtaining employment (or of actualising human capital), which is the dominant feature of the basic theoretical model of human capital. This is all the more true given that the return on the human capital investment can be obtained only if there is (a possibility of) actualisation, hence the importance of employability. Thus, in a context of increased scarcity of employment and of competition on the labour market, continued education can be justified only within a framework of strategic behaviour where continued education helps individuals to differentiate themselves from, or challenge, their Competitors, i.e. all those competing to find jobs on the labour market, by endeavouring via this continued education or a revision of their original training choice to (re)consign - to take up the "ladder" metaphor used by Jarousse and Mingat (1985) - competition to "another ladder" or another "rung" on the ladder, via experience or a diploma in the case of continued education on completion of a BTS or DUT.

Comments arising from these results: Have these training courses been diverted from their original purpose? Do the criteria for admission to these cycles need to be rethought? Should the continuation of studies be curbed or given free rein?

Have the BTS and the DUT been diverted from their original purpose? Since these training courses sow the seeds of continued education because of their selective admission procedures and the numerous bridges that they offer to higher education, it was inevitable that education continuing on from them would increase: rather than be limited to the 5 to 10% of students making "incorrect" choices initially anticipated in the decree establishing the IUTs; over 60% of diploma holders now continue their education, according to the latest figures. Does this lead to the conclusion that a number of students in the French educational system are making ill-advised choices? Without going that far, we can, however, confirm that the BTS and DUT training courses are victims of the reasoning of those of their students who perceive these courses strategically and transform them into a step in the training process leading to other higher education streams. As foundation courses for first-year university students, these cycles are an optimum choice in a climate of uncertainty, since they make it possible to minimise the risk of failure and to maximise students' effectiveness by enabling them to revise their choices in line with employment trends and to go on to further studies.

While this use of these training courses as foundation courses is the best, or most effective, course for one category of students, the Malthusianism of these cycles - resulting from their restricted intake - puts other groups of students at a disadvantage. Students wishing to follow short courses of study in higher education, who fail to gain admission because of the selective admission procedures shaped by their restricted intake, are implicit victims of the system. While vocational and technical training is perceived as a last option or is the outcome of failure at secondary education level, there is one place in the academic system where it is much in demand and much sought after by large numbers of young people: higher education. Is this not a paradox? Since it is so much in demand, many students see their aspirations to attend such courses come to nothing. Because they have no other option, young people refused admission to STSs or IUTs, turn to universities, which theoretically involve lengthy periods of study, and where large numbers of them fail! What solutions have been envisaged? Should these cycles not be opened up, along the lines of university recruitment, to give everyone a free choice of higher education?

Moreover, from the point of view of the cost to the nation of the "diversion of these training courses from their original vocation", the cost of a year's study at an IUT or an STS was FRF 53 500 on average in comparison with FRF 35 500[105] for a university student. Consequently, since over 60% of students go on to further studies on completing their IUT training courses or, in other words, use these cycles as *crypto*-DEUGs, the cost to the nation is relatively high; the bill is even more expensive if account is taken of the cost of students entering universities, because they have not been accepted by these short cycles, and then failing. The costs of *Institut Universitaire Professionalisé* (IUP - vocational university institute) training courses, recently set up as an alternative for students unsuited to university courses, many of whom are students who wish to embark on courses of study that are both technical and short, also need to be added to this.

It is these results and the considerations to which they gave rise that prompted an investigation of the two-year courses of the Community Colleges in the United States.

2. *Two-Year Colleges in the United States: From Initial University Education to Short Technical Training Certificates*

Reasons for studying the Two-Year Colleges in the United States

Definitions and findings: the effects of the "open-door" policy on transfers to four-year colleges

This research project on the two-year courses of the Community Colleges in the United States was prompted chiefly by the characteristics of these training courses and their development. The development and functioning of these institutions could go some way towards answering the questions and considerations that analyses of short technical training courses in France have raised and are still raising. We shall demonstrate this in what follows. We need to begin by defining these training courses and identifying the extent to which their characteristics resemble those of BTS and DUT training courses in France.

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[105] Cf. *L'état de l'école*, no. 7, October 1997, Ministry of Education, Research and Technology, pp. 54-55.

The two-year courses of the Community Colleges: two-year post-secondary training courses similar to the BTS and DUT

Like the French higher education system, the American system offers a wide range of post-secondary training courses at colleges and universities. Universities offer training at both undergraduate and graduate level. The two-year colleges (TYCs) offer two-year post-high-school training at undergraduate level. In common with IUT and STS training courses, the latter therefore provide two-year technical training courses at post-secondary level.

Private TYCs are called "junior colleges" and public two-year colleges are known as "community colleges". These TYCs are American higher education centres offering two-year courses that are open to students who have obtained a high school degree at the end of their secondary education and to mature candidates. At the end of the two years, students who have succeeded in passing various examinations are awarded an associate degree[106]. Technical and vocational certificates are also awarded to students who have been successful only in technical and vocational subjects.

History and development that differ from those of the BTS and DUT

These courses go back much further than the BTS and DUT courses, to the beginning of the century, when they were set up in response to the increasing tendency to continue education after high school. Their original objective was to provide foundation courses for new students - freshmen and sophomores - entering university, in order to relieve university professors and lecturers of this task: *"Rather than use their substantial academic resources to provide new students with the foundations of learning, many educational leaders advocated removing the first two years of higher education from the university and proposed that these basic learning and thinking skills be taught by a separate institution, one that would bridge the gap between high school and higher levels of scholarship."*

Their main aim was therefore to prepare "young" students for the four-year institutions, i.e. to become university undergraduates. The TYCs were set up either in cooperation with high schools or developed independently and autonomously, solely to educate students in their first two years of university. In fact, the universities continued to provide teaching at this same level, alongside the TYCs. In addition, the great depression at the end of the 1920s led to an extension of their role together with an increase in their number, and, at the same time, a shift away from their "public junior college" nature towards multi-purpose establishments: general education preparing students for transfer to the four-year colleges, and offering technical and vocational education to train people able to meet the recruitment needs of trade and industry.

A policy of open access - open-door policy - as regards admission to these cycles

Unlike the French short cycles, the TYCs in the United States are "open" cycles, i.e. they have no selective admission procedures. They therefore accept any student with a high school degree or who is at least 18 years old. This means that like the BTS and DUT training courses, these institutions train around 37%[107] of the post-high-school population. Nor is this open-door policy restricted to student numbers; it also extends to the cost of studying in these institutions - compared with the cost of studying at university or in a four-year institution, studying at a TYC is virtually free. This means that they tend to serve disadvantaged social groups, ethnic minorities, etc., thereby meeting a growing social need.

Research objective: the impact of the open-door policy on the continuation of education

Our findings from the initial research project on the French situation were that students' decisions to continue their education after the award of a BTS or DUT were in general shaped by the context of job rationing and increased competition on the labour market, and in particular by the selective admission procedures for these study

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[106] The most popular subject areas are computer science, engineering, communication technologies, paramedical services and care sector, accountancy, business and management studies and agronomics.

[107] National Census for Education Statistics, Fall 1995, p. 12.

cycles which consequently accept good candidates, able to follow lengthy courses of study, whose propensity to continue their education is relatively strong.

For this reason, given the current favourable context of the American labour market, it seemed highly appropriate to study the TYCs, whose main features are that they operate an open-access policy and prepare students to continue their education at the four-year colleges, in order to analyse whether the non-selective admission procedures used by these post-secondary training colleges had any impact on the continuation of education, in a context in which jobs are not rationed. The particular feature of these colleges is that they are non-selective cycles that provide two years of general and technical education and that, unlike the BTS and DUT training schemes, help students to prepare to continue their education or to transfer to the four-year colleges. This provided the motivation for the research project. This project, which is still in underway, seeks to analyse whether the lack of selection for admission to these cycles has any impact on students' decisions whether or not to continue their education in a favourable labour-market context.

Method, some initial findings and their limitations

Some initial findings from the American data available and from specific surveys

Analysis of American data available and of specific surveys conducted in the San Francisco Bay area and the State of Oklahoma shows that these training options ultimately seem to meet a need for short training courses, which can be directly actualised on the labour market, and which do not lead on to further studies. Although these training courses officially make provision for continued education, the rate of continued education on leaving TYCs is tending to decline, and in 1994 only 22% of students went on to further study. How is this result to be explained? Part of the explanation appears to lie precisely in the lack of selection for admission to these cycles which is enabling them to meet a growing social need from disadvantaged groups and ethnic minorities who wish to enter short courses that lead rapidly to a job.

The limitations of these initial findings

These findings should be treated with caution, however, since they are incomplete. Moreover, while these training courses have aspects in common with their French counterparts as regards their organisation and structure, this is not the case with their population. American students do not have the same profile as French students; while almost all students in these cycles in France are in full-time education, the majority of American students are not. The average age of American students in these cycles is also much higher than the average age of French students - in France, students generally tend to go on to higher education directly after obtaining their baccalauréat, with no gap in between; in the United States it is much more common for students to begin studying in these cycles after a gap of several years, often combining their studies with paid employment.

Conclusion

To conclude, this research project had a twofold objective: academic, on the one hand, and to review education policy, on the other hand.

From the academic point of view, we have attempted to show that, without calling into question the substantial contribution made by Becker's individualistic approach to investment in human capital, the education demand from students continuing their education has to be seen, in a context of job rationing, as reflecting strategic decisions rather than simply individual decisions to allocate resources in ways that are in keeping with the objectives pursued. This strategy-based approach would explain why numbers continuing their education have risen so sharply. It was from this standpoint, and looking at the problem in terms of sequential decision-making, that we analysed why education is continued on completion of the "final" short technical cycles of higher education in France, such as the cycles preparing students for the BTS and DUT. The increase in the number of students who continue their education when they complete these cycles is indicative of strategic behaviour of this kind. Indeed, this behaviour has a twofold strategy, since it combines a "training strategy", that attempts to minimise the potential risk of failure during the initial stages of university courses, with an "employability strategy" that attempts, through continued education, to maximise competitive advantages by consigning the competition to another "ladder" (by obtaining a higher diploma) or another "rung of the ladder" (by a year of specialisation that makes students stand out from other competitors on the labour market who do not possess this characteristic).

From the point of view of education policy, we aimed to show that the selective admission policy operated by these short post-secondary education cycles in France has had negative effects, because of its strategic use by students, and could therefore deflect these education policies away from their original vocation, i.e. providing final training; this deflection is costly not just for the nation but also for students who wish to follow short higher education courses leading directly to a job, who are victims of these cycles' restricted intake.

The two-year colleges in the United States which, like their French counterparts, provide two-year post-secondary training courses but, unlike their French counterparts, operate an open-door policy and are designed to enable students to continue their education, offered fertile ground for investigation to test whether "non-selection" for admission to this type of post-secondary education had any impact on students' decisions to go on to further education in a favourable labour-market context.

The small numbers of students continuing their education on completion of these cycles confirmed our hypotheses and our recommendations in terms of education policy, i.e. that these training cycles should be "opened up"; this would not just meet a social need but would also be of benefit to universities and the nation as a whole. If there were to be open access to these cycles, students who are currently "victims of their restricted intake and who turn to universities because they have no other option" would then be able to register for these short technical cycles. Universities would then acquire only students motivated to follow lengthy courses of study who have chosen to embark on university courses of higher education of their own free will (which could only increase the DEUG success rate) with the result that there would also be a reduction in the cost to the nation of failure and of re-orienting students.

One of the aims of our research into the two-year colleges in the United States was also to "learn from others" by conducting an investigation based on an approach that was more synergistic than comparative. At a time when France is moving towards the decentralised powers and responsibilities for training set out in the Five-year Law and greater emphasis is being placed on the concept of "lifelong learning" in the discourse of those responsible for educational policy, both in France and in Europe in general (the European Commission declared 1996 the Year of Lifelong Learning), the American experience, based on the specific surveys that we carried out at 15 Community

Colleges, could but enhance our knowledge of effective ways of organising partnerships between local players involved in initial training, practices which are only now being built up in France due to our education system's long tradition of centralisation, and of implementing policies to develop the labour force that focus on "lifelong learning" (Gendron, 1997).

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ANNEX: Tables 1 and 2

Table 1: Model setting out the probability of continued education for a man with a BTS or DUT.

Variables		*BTS*		*DUT*	
Reference variables	*Active variables*	*coeff.*	*sign*	*coeff.*	*sign*
Constant		-0.75		1.3	
Identifying particulars					
Ile de France	South	-0.24	-	-0.54	--
	Centre	0.11	ns	-0.28	-
	North	-0.16	ns	-0.08	ns
	West	-0.19	-	-0.65	--
Behind at school	Standard age	0.93	++	0.72	++
Married, divorced	Unmarried	0.64	++	0.55	++
Father not managerial	Father managerial	0.54	++	0.22	+
Mother not in employment	Mother in employment	0.14	+	-0.04	ns
Discharged, exempt from mil. Service	Deferred military service	3.48	+++++	4.07	+++++
Technical bac.	General bac.	0.25	+	0.73	++
Service specialism	Industrial specialism	0.69	++	0.73	++
Tension on the labour market					
Unemployment ratio	- Average	0.22	+	0.24	+
Low					
*	- High	0.11	ns	-0.50	--

Average overall duration of unemployment **Low** *	- Average	-0.19	-	-0.43	-
	- High	-0.68	--	-0.22	-
Ratio of unemployment for more than 6 months before first job **Low** *	- Average	-0.07	ns	0.21	+
	- High	-0.31	-	0.09	ns
Job characteristics					
Earnings>average earnings *	Earnings<=average earnings	-0.16	-	0.13	+
Temporary-employment ratio **Low** *	- Average	0.48	+	0.33	+
	- High	0.72	++	0.20	+
Management ratio **High** *	- Low	-0.02	ns	0.39	+
Ratio of employment under permanent contract **High**	- Low	0.17	ns	0.40	+
	- Average	-0.14	-	0.53	++

Data CEREQ 1991, processing Les.

* in March 1987. ns: not significant, threshold 5%. Equivalent figures for BTS and DUT: 75.7 % and 82.3 %.

Table 2: Model setting out the probability of continued education for a woman with a BTS or DUT.

Variables		***BTS***		***DUT***	
Reference variables	*Active variables*	*coeff.*	*sign*	*coeff.*	*sign*
Constant		-0.44		0.07	
Identifying particulars					
Ile de France	South	0.63	++	-0.4	-
	Centre	0.09	ns	-0.43	-
	North	0.24	+	-0.73	--
	West	-0.41	-	-0.36	-
Behind at school	Standard age	0.72	++	0.82	++
Married, divorced	Unmarried	1.23	+++	1.24	+++
Father not managerial	Father managerial	0.57	++	0.48	+
Mother not in employment	Mother in employment	0.13	+	-0.03	ns
Technical bac.	General bac.	0.62	++	0.67	++
Industrial specialism	Service specialism	0.17	+	0.40	+
Tension on the labour market					
Unemployment ratio **Low** *	- Average	-1.13	---	0.61	++
	- High	-0.39	-	0.16	ns
Average overall duration of un-	- Average	0.81	++	0.32	+

employment **Low** *****	- High	1.64	+++	-0.49	-
Ratio of unemployment for more than 6 months before first job **Low** *****	- Average	-0.83	--	0.12	ns
	- High	-0.73	--	-0.17	ns
Job characteristics					
Earnings>average earnings *	Earnings<=average earnings	0.15	+	0.29	+
Temporary-employment ratio **Low** *****	- Average	-0.43	-	0.32	+
	- High	-0.18	ns	0.71	++
Management ratio **High** *****	- Low	-0.18	-	-0.27	-
Ratio of employment under permanent contract **High**	- Low	0.18	+	0.004	ns
	- Average	0.54	++	-0.16	ns

Data CEREQ 1991, processing Les.

* in March 1987. ns: not significant, threshold 5%. Equivalent figures for BTS and DUT: 71.1 % and 70.9%.

5. Comparative VET Research: Experiences of a Greek Institution

Prof. Dr. Nikitas Patiniotis and Dr. Dimitris Stavroulakis

Introduction

Intensification of efforts pertaining to vocational education and training (VET) at the European level has rendered comparative research an inevitable *modus vivendi*. Although emphasis on VET issues by the EU has not been followed by commensurate developments within the Greek context (as will be reiterated throughout this paper), still Greek researchers and research institutions have not escaped from this influence. Hence, through comparative VET research Greek researchers have been quite often offered a sheet-anchor enabling them to overcome domestic difficulties. On the other hand, the trend toward globalization of research generates novel influential dynamics, likely to impose occasionally their own laws on peripheral environments (like the Greek one). In this paper a brief outline of the Greek VET and research systems will be made first, followed by a discussion of experiences obtained mostly throughout our participation in the projects EUROPROF and ACCESS, within the context of Leonardo.

The target of EUROPROF (Brown, 1997) has been the identification of new occupational profiles for trainers of trainers, that is for persons who undertake to train VET teachers, instructors and other professionals. Ultimately, new curricula and training programmes for these professionals are going to be produced. This project is a big one, necessitating interdisciplinary research and including more than one participants from every European countries, of very diverse academic backgounds.

On the other hand, ACCESS is a smaller project, having a sociological orientation: It deals with the problems associated with the access of women to the technical occupations, and with the formulation of strategies for the facilitation of their integration in the labour market and for the improvement of their status. Research is conducted in four countries, namely Belgium, Greece, The Netherlands, and Spain.

1. *A note on the function of VET in Greece*

The Greek educational system has been often characterized as "one-dimensional" on the grounds of offering mainly general knowledge, primarily aiming at preparing pupils and students to enter a higher educational level. All pupils and students had to follow the same curriculum, irrespective of their vocational orientation and competencies. This trend has been attributed to the fact that traditionally Greece has been a country of low industrial capacity, therefore requiring rather few technicians mostly of average qualifications.

Consequently, VET has been considered appropriate mainly to "failures" of the school system. Its inferior position is attributed mainly to the following (Stavrou, 1995):

- Absence of certificates' guarantee and recognition by the labour market.

- Limited funding by the state, resulting in an unpleasant school environment and in the lack of infrastructure.

- Lack of prestige of technical occupations in the Greek social context.

The latter issue is associated with a strong pre-occupation of parents and offsprings with university certificates, given that they had constituted the means towards a successful career in the past (Tsoukalas, 1986). Although recently employment prospects for university graduates have become very grim, they still remain slightly better compared to the rest.

Students following VET have always been lesser than those following general education, their attendance however rising constantly in the recent years. This increase is attributed to the slight moderation of the problems reported previously, combined with the development of a highly stratified VET system, initiated by the end of the 70s. The new system attempted to attract the interest primarily of employers, by producing semi-skilled and cheap labour, but also of parents, by providing alternative vocational opportunities to offsprings. Criticism concerned mostly the delay in the implementation of changes, with significant repercussions on the satisfaction of the economic and social needs mentioned previously.

Nevertheless, the system was not given enough time to mature; very recently, a retrogression toward the past situation has been witnessed, involving the abolishment of flourishing VET institutions, out of no justifiable reason. It seems that the Greek VET system is on the way back to an inferior situation, been purported to execute an indelible dichotomy: the more qualified pupils and students are oriented once more to general education, been motivated by the impending free entrance to universities, while the less privileged are going to pass through the shoddy environment of vocational education. Interminable restructuring and reforms in the field of education have resulted in the creation of a sense of uncertainty among parents, students, and teachers. Generally, changes have been so rapid, that plans have not been given enough time to yield any concrete results.

2. *The Greek research system with regard to VET*

Research in Greece has been conducted by variform institutions, mainly on a voluntary basis. Central co-ordination of diffused research activities by the state has been initiated in 1971 through the establishment of a respective agency. Nevertheless, numerous re-organizations followed, and the General Secretariat of Research and Technology (GGET) finally has been founded in 1985, being responsible for the planning and implementation of the national research policy.

Greece, being a peripheral country, traditionally has been an importer of know-how and technology with significant repercussions on research, as will be demonstrated below. Peripheral economies are often designated by "structural hetero-geneity" (Patiniotis, 1979), meaning that they are composed of an "advanced" segment addressing to the international markets, and a "backward" one, more or less a remnant of an earlier stage of economic development. The advanced part tends to secure its competitive advantage through an incessant flow of technology and information from economically developed countries. On the other hand, the least developed part relies mostly on the experience and imagination traditionally stored in craftsmanship, in order to grapple with the threat of innovation (Patiniotis, 1988).

Under these circumstances, research activity in Greece has the propensity to be disconnected from the economic and social needs, aiming mostly at an abstract study of "science and knowledge". Quite naturally, finance of research comes largely from the state (national research institutions, ministries, banks etc), while the private sector apparently has no particular interest in investing in research whatsoever. Anyway, in the recent years the state subsidy of research (and in education), expressed as a percentage of the GDP, tends to be persistently very low compared to the EU and OECD countries.

In particular as regards the VET research serious deficiencies are encountered, including the priorization of positive sciences at the expense of human ones, but also the preponderance of general education over VET, the inability to absorb enough funds from EU, the frequent substitution of government executives in charge both of research and education, the lack of sensitivity on the part of public administration to VET issues, and the absence of adequate infrastructure. Although this situation has started to improve through influences from EU, it still has a long way to go. These issues will be examined briefly in the following.

2.1 Consideration of VET research of second priority

The EU policy of including VET among its first priorities has been determined, among others, by the factors below (EU Seminar, 1997):

- Response to the challenge of technical progress, by means of supplying the labourforce with adequate skills and qualifications.
- Incorporation of the less privileged social groups into the labour market.
- Conbat against unemployment.
- Moderation of economic and social inequalities, both among and within states-members.

Nevertheless, VET research has not been paid a proportional attention by the Greek social actors, still remaining in the shades, while a recent enlivening trend is considered rather "imported", as it has been fuelled mainly through EU funds. On the other hand, an overall degradation of research on human

sciences has been witnessed recently in Greece as a by-product of the reduction of state funds disposed for research. The process of sorting out research topics to be funded by the state has been greatly influenced by the so-called "cost-benefit principle", maintaining that research should contribute directly to the achievement of measurable, quantitative objectives (Liakos, 1997). In this respect, positive sciences have outperformed the theoretical ones, a fact resulting in the accumulation of acute problems regarding the operation of the affected research institutes, like the National Center for Social Research (EKKE) and the National Institute of Research (EIE).

2.2 Absorption of EU funds

Low absorption of EU funds for education has always constituted a sore spot in the relations between EU officials and Greek ministers. According to a mutual agreement, funds for education amount to 573,920,000 drachmas (approximately 1,850,000 ECU) for the period 1994-1999. Nevertheless, during 1994-1996 the absorption rate concerning educational activities reached only 18.9 percent. Specifically, the absorption rate for educational planning and training of civil servants reached only 7 percent, the respective for post-graduate studies, grants and research reached only 9 percent, and the one concerning activities of connection of education to production amounted to 7 percent. Mr Flynn, the Commissioner on Education, attributed the long-standing irresolution of the Greek government to the following factors (Kathimerini, daily, 16.11.1997):

- Frequent changes of state executives dealing with education.
- Inadequate infrastructure and control mechanisms.
- Lack of experience of the staff of the Ministry of Education, combined with the additional requirements of the novel subsidy programme.

Particularly the latter seems to constitute a major deficiency, as most civil servants tackling these issues lack the educational background and the competencies necessary to formulate documented proposals for the absorption of funds. Most of all, EU officials detest transfer of funds from one target to another, often claimed without adequate justification. The problem is mostly focused on second-level education, entitled to approximately 40 percent of the total EU subsidy; as the Ministry of Education, the unions of second-level instructors, and the school units admittedly all lack the infrastructure to elaborate and to implement documented proposals, the universities have been called in to administer this effort, been promised about 10 percent of the total sum as a reward (Kathimerini, daily, 26.11.1997).

2.3 Attitudes of policy-makers

A notable feature of the Greek political life concerns the frequent substitution of government-appointed officials in charge of the various state agencies, those pertaining to GGET and VET constituting no exception. A lack of continuity in the policy of these organizations is evident. This can be illustrated by an example, concerning a big project that had been assigned to Prof. Patiniotis, involving the identification, classification, and register of all existing occupations within the Greek context. There is no need to stress the importance of this endeavour, not only to VET but to economy in general, taking into account that Greece is the only European country that has not proceeded to that yet (Patiniotis, 1996). Nevertheless, the project has been stopped all of sudden, as a side-effect of a reshuffle of the government cabinet.

2.4 Lack of infrastructure

Lack of infrastructure concerns absence of adequate data bases on VET issues, obsolete statistical data, and deficient libraries. As indicated in the previous, only recently did VET research start to develop. As a result, empirical evidence is scant and occasionally no comparison with the past situation is possible. Processing of statistical data is carried out at a slow pace; quite often access of researchers to the latest statistical information is contingent upon their personal acquaintances with the responsible civil servants: the disclosure of relevant information may take the form of a personal favour.

A delay is also witnessed in the communication of modern theoretical concepts, in the acquisition of new methodological tools, and in the purchase of the latest computer programmes. Finally, libraries have become the first, easy victims of budget cuts dictated by the rigid fiscal policy. Their deficiencies concern, among others, curtailment of subscriptions to scientific journals, and almost total absence of the latest influential books. Despite gaping deficiencies, the absorption rate of EU funds for the improvement of the infrastructure of libraries reached only 20 percent during 1994-1996 (Kathimerini, 16.11.1997).

3 *Effects of comparative research*

3.1 The issue of national identity

In the previous, the overall weakness of the Greek research and VET systems to respond to the new research challenges at the European level has been sketched. An agonizing question posed by numerous Greek researchers concerns whether Greece is likely to be appropriately placed within the emerging European infrastructure, or it runs the danger of becoming alienated from its national identity (aphellinismus). Furthermore, certain scenaria have been formulated as regards the future educational/cultural developments (Mouzelis, 1996):

- Entrenchment on obsolete dogmas based on religion and nationalism.
- Uncritical submission to the European imperatives whatsoever, with according degradation of the national culture.
- Total contestation (based on meta-modern thought) of the worth of the European compound of cultural trends.
- Constant interaction with the European environment, aiming at the transplant of selected ideas for the construction of a new Greek educational/cultural system within the context of a European social New-Deal.

Most researchers maintain that the adoption of the latter strategy constitutes the most promising alternative, emphasizing that a "shaping" national policy is profoundly more sound than an "adaptive" policy. For this to be feasible, the overcoming of structural deficiencies in the field of education, combined with an active participation in the developments at the European level is indispensable (Pesmazoglou, 1995). According to our viewpoint, however, the eventuality of a consistent and dynamic cultural/educational intervention in the European social life seems far beyond the existing Greek capabilities. In a previous work (Patiniotis, Stavroulakis, 1997) we stressed that the Greek educational system has already been built mostly upon foreign influences. The latest educational reform has also been blamed for been scheduled solely in order to facilitate the absorption of funds from EU (Kathimerini, daily, 14.11.1997). Consequently, we may assume that the Greek education does not contain substantial inherent "national" elements. The same, if not worse, is true for research, recently having harboured the tendency to "rush where the money is". In most European countries, the EU research financing represents only a portion of their total research budget. Nevertheless, the Greek state expects from EU to back as many research expenses as possible (Liakos, 1997), refraining from autonomous funding and participating only in co-finance of research projects together with the EU authorities.

Nevertheless, influx of EU funds has somehow facilitated the cultural adaptation of the Greek research foundations to the fast-changing research environment; ameliorations are manifested, among others, by the simplification of internal procedures, and by the establishment of effective communication channels with relevant organizations in EU.

Following this trend, research within the Greek context remains ineffective also by means of neither functioning within the context of an integrated national plan, nor being submitted to some form of co-ordination or evaluation. Lack of interest of state authorities is demonstrated, among others, through their frequent absences from international meetings organized for the discussion of contents, goals, and implementation of big EU projects . Lack of central co-ordination can be traced, among others, through the voluntarist attitudes fostered by several Greek researchers who function mainly through their participation in certain international networks that deal with subjects irrelevant to the Greek context. On the other hand, scientists with identical academic backgrounds may never establish any form of joint research or collaboration in general.

3.2 Importance of research topics

Comparative research has helped to reveal serious deficiencies in the Greek environment. For example, the necessity of elaborating the catalogue of occupations is reported, even though the issue became entangled into the labyrinth of bureaucracy. Another issue concerns training of trainers, constituting the target of the EUROPROF project. Till recently, in Greece VET trainers did not have a specific occupational profile and their profession did not require any formal qualifications at all (Patiniotis et al, 1997). Nevertheless, trends at the European level seem to have a stimulative effect on Greek VET, necessitating the consolidation of training of trainers as an institution.

On the other hand, comparative research on subjects of intense social interest (like the incorporation of minorities in Greek society, the repatriation of immigrants, and most of all, the facilitation of women's access to the labour market), has limited prospects of leading to concrete applications within the Greek context. Unfortunately, these groups are confronted with the inevitable dilemma "exploitation or unemployment", as the prevalent insecurity in the labour market refrains the trade unions from effectively dealing with their problems. Especially concerning the issue of women, foreign bibliography abounds with studies and research (see for example recent volumes of *Work, Employment and Society, Current Sociology, The British Journal of Sociology* etc). Nevertheless, in Greece the issue remains rather peripheral, and relevant research has become activated only recently, mostly through influences from EU.

3.4 Impact of national differences

A common problem encountered in transnational research on VET concerns the polymorphous systems, infrastructures, and cultural attitudes emerging in the various national environments. Till recently, the sole practice concerning the diffusion of research outcomes in EU consisted in the writing of a separate report for each country. Researchers even pointed to peculiarities of their home country in order to propose that the construction of a new framework for the study of these "idiomorphic" social phenomena is required (Sissouras, 1989). Undoubtedly, the elaboration of typical national reports had been indispensable during an earlier period of *reconnoitre* and *rapprochement* between states-members. Nevertheless, by now the compilation of numerous volumes of national reports, sometimes written without substantial cooperation among authors, occasionally also written in different languages, does not appear to suffice anymore. This "separatist" approach leads to the attribution of more emphasis on national differences rather than on similarities, therefore being likely to deviate from the desired goal of European convergence.

According to our opinion, a unitary approach has to be invented according to the particular demands of each research topic, to be forged through synthesis and induction. The development of common "cornerstones" for the EUROPROF project constitutes an important contribution to this direction (Attwell, 1996). Within a commonly accepted framework concerning the training of VET trainers, national partners were left free to develop their own systems with regard to their respective national, regional, and cultural requirements. These cornerstones included, among others, assumptions about anthropocentric production, social inclusion, work process knowledge etc.

Another important methodological contribution of the EUROPROF concerns the establishment of *ad hoc* inter-disciplinary task forces, composed of a limited number of participants, for the study of important research questions through a process of mutual learning (Attwell, 1997). Such research questions concerned, among others, the identification of the precise meaning of education-related and work-related concepts within each national context, the definition of the term "social innovation", the possibility for employees to "shape" their own working environment after receiving an appropriate training etc.

4 *Conclusion*

Both VET and research in Greece lag considerably behind the rest European countries. In this paper a scepticism is expressed whether Greece will ever overcome its structural shortcomings in order to join the EU on a fair and socially acceptable basis. Major obstacles concern:

- The inexperience and/or the indifference of domestic authorities on issues pertaining to VET and to research.
- The lack of infrastructure in terms of adequate data bases, libraries, and facilities.
- The meagre subsidies provided by the state combined with an overall incompetence of civil services to absorb enough funds from EU.

Controversies and wavering of the national educational planning, as well as the lack of a central co-ordination strategy on research activities, compose together a rather gloomy outlook concerning the terms of a future co-operation between Greek research and research initiated by the EU. Dependence of the Greek VET research mostly on funds provided by the EU may bring about the total submission of the Greek VET to external imperatives.

The European influence seems to have contributed significantly to the identification and exploration of topics (or problematic areas) requiring research within the Greek

VET system. Examples reported in the previous concern the elaboration of the catalogue of occupations, as well as the issue of training of trainers. On the other hand, issues of crucial social importance have also been investigated, albeit with scant prospects of applicability within the Greek context. Projects on women employment, repatriating immigrants, and minorities, reflect the sensitivity of the EU administration to these issues. Although the Greek legal provisions regulating these issues are in the same direction, the state support is by and large exhausted at the verbal level; that is, legal devices are not coupled by concrete policy measures, involving the activation of the enervated civil services, and most of all, the appropriate disposal of state subsidies.

Finally, comparative research is on the way to promote innovative, unitary methodologies besides the prevalent "separatist" approaches that focus mainly on the particularities of each state-member. In other words, it is likely to foster flexible frameworks, within which researchers may incorporate experiences from their own home country to a broader, European context.

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Workshop 2:

Approaches and methodology in comparative vocational education and training research

Walter Georg[108]

The knowledge that the relationship between the aim and function of country-specific organisational forms of vocational education and training cannot be deduced by comparing institutions, but only by comparing the structures of such systems, has far-reaching methodological consequences: comparative vocational education and training research cannot be limited to examining national *vocational* training establishments, measures and issues and comparing them with each other. It is only by analysing the relationships in terms of corporate needs and effects between forms of skilling and corresponding corporate structures (e.g. labour market structures, transitional behaviour, the company's personnel policy) that logics can be discovered for taking action and achieving developments that are eluding the current reference system of categories and interpretation. For comparative research, this means cross-border co-operation in at least two ways:

- Dividing the work up into research fields and institutions (which, for their part, vary from country to country) has proved of little use in comparison. The national peculiarities of vocational education and training, work organisation and labour market can only be deduced by analysing the highly interwoven requirements of policy, organisational and personal behaviour. In order to examine the context, interdependencies and functioning of vocational education and training in each particular case, close co-operation is therefore needed between occupational education and vocational education and training research and other disciplines (economics, sociology, psychology, political science, etc.).

- Insights into the different relationships between aim and function can only be gained by taking a different perspective which allows for the national social interpretations of the countries being compared and their significance. This means breaking away from the use of familiar analysis categories that have been established on the basis of our own experience, and calls for international co-operation, i.e. teamwork between researchers in the countries concerned.

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The main topic of the workshop (both implicitly and explicitly) was the expectations and problems of *cross-border co-operation*, and the approaches used for finding solutions. Its thematic structure, composition of participants and communication methods used reflected aspects of methodological problems in the field of comparative research. The researchers and research groups participating in the project on vocational education and training research in Europe developed a kind of international project language, which bore little relation to the (equally highly specific) terminology that had evolved within the context of the dual vocational education and training system and tradition of German vocational and economics education.

The methodological approaches presented in the workshop consisted of reports on the findings of specific comparative research projects in Europe. The approaches used were as varied as the range of questions posed, from efforts to define competence in terminological terms to comparison of national approaches to reform and comparison of the function of labour market policy.

The first paper, by *Alan Brown*, on the findings of an extensive comparison of vocational socialisation in three countries, gave an excellent insight into the attempt to use the specific requirements of the relationship between education and employment as a quasi-experimental basis for highlighting the machinery moulding the different systems in each case. The *Matching* method used in this project was aimed (as in each experiment) at creating research conditions that would allow the relationships between independent and dependent variables to be systematically analysed. Only in this way could interactions be proved and interpreted as the effects of variations in the respective system structures.

Matching means establishing the highest possible contextual similarity, i.e. drawing parallels between the characteristics of the groups compared (to prevent group characteristics from becoming confused with the effects of independent variables). *Matching* therefore requires (as did each experiment) a thorough knowledge of the key variables which could have an effect on the result. Even though this is only seldom the case, and the researcher knows only part of the relevant variables in a field and the interactive relationships between them, the use of *Matching* requires precise formulation of hypotheses and the relationships between variables to be defined.

The paper by Alan Brown showed how useful, but also how time-consuming, it is to examine the relationship between training and continuing training structures and the personal development of the individual using Matching in a multi-country comparison. Only a multiannual analysis carried out in context allows hypotheses to be defined and labour market and employment structures to be selected that have the necessary far-reaching identity (drawing parallels in context) for research into the influences of different skilling models upon the vocational socialisation of the skilled worker.

In comparison with the methodological approach to defining terminology described in the first project, that described in the paper by *Johanna Lasonen* und *David Raffe* was more modest. In contrast, it gave an excellent insight into the difficult process of mutual rapprochement and understanding within a Community project with participants from eleven institutions in eight European countries. In view of the scale of the project, the topic, the comparison of reform strategies on the relationship between vocational education and training and general education in upper secondary school education (education from the age of 16), could only be carried out by establishing relatively rough categories of strategy aims. More information could be obtained by adopting a methodological approach to the various stages of the project: from national individual analyses to joint research and agreement on comparison categories and the development of mutual understanding of the structure of an agreed joint research report. Mutual learning through traditional national research and co-operation, the need to agree on definitions, due to the nature of the project, and the co-ordination needed for multidisciplinary, multicultural and multinational research was the main methodology described in this paper, rather than the methodological implications of a project questionnaire. Finally, the problems of reaching agreement in the field of international education and training policy were also mirrored in the methodology problems that arose in the research process: both were due to different views regarding aim, interpretation and use, which followed a sort of self-conscious national logic.

The paper by *Asa Murray* and *Hilary Steedman* was an example of research projects which compare the achievements of national education and training systems, in which the policy-making and economic arena has once again expressed increasing interest in recent years (cf. e.g. the debate on the TIMSS Study[109]). The project compared the effects of different education and training systems in six European countries and established relationships between levels of education and training gained after taking final examinations and the qualification structures of the working population in the respective countries, and their changes, over the past few years. Comparisons on the basis of national statistics on the working population and the International Standard Classification of Education (ISCED) led to differing opinions on the commonplace theory that education and training was expanding world-wide; they provided information on what was (implicitly) understood by the terms *qualified* and *unqualified* in national terms and supplied statistical data which could be used to establish interrelations between qualification structures, the segmentation of the labour market, how companies organised work, etc. The provisional conclusions presented in the paper led to a debate on the meaningfulness and compatibility of statistical data. It was questioned whether, in view of the sometimes considerable regional differences (within a country), the nation was a useful distinguishing criteria in comparison, and whether a set of national data could provide a suitable source of information.

A similar debate was launched by the paper by *Klaus Schömann*, which examined the effects of training and education and continuing training and education on the dynamics of labour markets. By focusing on "transitional labour markets", the paper expanded on labour market theory and thus, at the same time, encouraged the expansion of labour market policy tools. The aim of the project was to compare labour market dynamics in European countries on the basis of statistical records (the usual reservations were expressed regarding the use and compatibility of statistical data from different sources).

Unemployment statistics provide data on the situation at different points in time, but do not indicate transitions from unemployment to employment, and vice versa, within the area of work, in and from different forms of employment, and within that of unemployment, in and from different forms of activity. The widespread focusing of vocational education and training research on the threshold (or thresholds) between school (or training) and employment obscures one's view of the great diversity of transitions that have now emerged, between learning and working, unemployment, continued education and training and employment, full-time and part-time work, etc. Indeed, the significance of transitions between different institutions and forms of education and training and continuing education and training for later transitional behaviour on (and between) labour markets has not been a research topic up to now.

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[109] TIMSS: Third International Mathematics and Science Study

Past experience of the relationship between (vocational) education and training and employment is somewhat sobering: in times of shrinking labour markets, the effects of using continuing education and training as a labour market policy tool are largely limited to its ability to absorb the unemployed. (Continuing) education and training can only be expected to have a high impact on employment in times of low unemployment.

Widening our knowledge of the dynamics of transitional markets provides labour market policy with a basis for using new tools which no longer only focus on encouraging normal working relations, but aim to ease the transitions between gainful employment and other meaningful activities.

The final paper, by *Sofia Isus Barado,* is the only paper (of those presented in the workshop) that did not describe an empirical research project. Rather, it presented attempts to define terminology on the basis of analyses in research literature. It focused on the concept of competence and examined changes affecting the interpretation of the relationship between qualifications and competence in the terms of technical, economic and social change. As concepts could not be defined outside their respective context, and *universal* categories for recording change and its consequences were not available, this paper once again referred to the problem of language which crops up in every international comparison, and is as trivial as it is insoluble. Attempts to define research terminology that transcends a given context which, in a way, can be used to describe different national structures in terms of concepts and results, are hardly appropriate for solving the main problem of establishing comparative analysis categories. Cultural backgrounds are always projected in each and every attempt to define general categories. Categories such as competence, qualification or occupation are becoming apparently identical social phenomena for topics of comparison, whose differences are measured according to standards that closely adhere to the national and social background of researchers, the institution they work for and their specialist field. In the end, comparison therefore serves to learn from others according to our own standards.

1 Comparative analysis of skill formation processes in England, Germany and the Netherlands

Alan Brown [110]

1. Background

The comparative analysis of skill formation processes in England, Germany and Holland undertaken in, 1995-96 represented the third stage of a series of longitudinal studies started in, 1988. An ESRC Senior Research Fellowship (Award Number H52427502594) enabled the strands of a number of previous investigations to be drawn together. The first stage Anglo-German project (1988-90), an associated study of the ESRC 16-19 Initiative, tracked broadly matched cohorts of 16-19 year olds on different trajectories through education, training and employment structures in two pairs of 'matched' towns: Bremen and Liverpool, Paderborn and Swindon. That study gave a differentiated picture of patterns of transition into employment in buoyant and depressed labour markets in the two countries (Bynner and Roberts, 1991).

The second stage Anglo-German project (1990-92) followed up 40 young people in each of the four towns, but this time explored broader identity formation processes involved in becoming adult (Evans and Heinz, 1994). However, one significant strand of that work (occupational identity development and skill formation processes) was deliberately under-reported at the time. This was because there was a very different **pacing** to skill development in the two countries. In particular, German young people are often not expected to reach fully skilled status until their mid-20s. Hence fully comparative analysis of the process through to fully skilled experienced worker status was not possible until the mid-1990s.

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In the meantime, however, a team of Dutch researchers had become interested in our 'close matching' methodology. They had developed a similar overview of young people's education, training and employment pathways (1989-90), comparable to our Anglo-German Stage 1 work. This gave them the base to match both our Stage 2 work (1991-93) (van der Aa and Nieuwenhuis, 1993) and to follow selected young people through to experienced skilled worker status (1994-1996). This work was funded by the Dutch Ministry of Education and Science, and was used to inform policy discussions about the possibility of introducing greater dualisation into vocational education and training. The Dutch interviewees were selected so as to allow direct comparisons with the Anglo-German matched pairs. Hence it became possible to carry out a sustained, systematic comparative analysis of the processes of becoming skilled in the three countries, drawing on the rich veins of data collected in the period, 1988-96. The data analysis is continuing, but a range of research findings can be drawn together to highlight some key issues in the design and implementation of longitudinal comparative research.

2. *Rationale for the research*

In the early stages of our comparative work it became clear that there was a need to look at the continuing education and development of young adults within each country in a differentiated way. That is, rather than treating national systems as monolithic, it is necessary to acknowledge there are wide variations within them according to occupational area, type and size of organisation, and relationship between education and industry. Also the focus upon individuals in context gives an insight into policy in action in a way which may be very different from the idealised account of the way national policies are thought to operate. Indeed this is one of the reasons why the three-way comparison is so interesting. The German dual system, the college-based Dutch system and the plethora of possible routes in the English system apparently offer sharply different routes to the continuing education and development of workers at skilled and technician levels. Whereas what are seen by the young people as their most significant learning and development experiences may not map very well on to expectations about how the formal systems should operate in practice.

Indeed, remarkably little is known about how the requisite skills, knowledge and understanding of an experienced (skilled) worker are acquired **in practice**. There is a marked lack of evidence about the impact of different patterning of continuing education and training upon such development. From an English perspective, comparisons about the development of the technician stratum are particularly interesting, both because of the historic weakness of the English system in developing comparatively few people at this level, and because this route is also being squeezed by markedly increased HE participation rates. One further feature is that all three systems are undergoing significant change and although there is considerable debate about the suitability of different approaches to skill formation, little attempt has been made to uncover the critical influences upon the quality of learning in different contexts.

The third stage of the research built directly upon the work of the ESRC 16-19 Initiative (Banks et al, 1992), the previous Anglo-German work (Bynner and Roberts, 1991, Evans and Heinz, 1994) and the matching Dutch research (Nieuwenhuis, 1991, Nieuwenhuis and Wiggers, 1992, van der Aa and Nieuwenhuis, 1993). The focus upon known local labour markets was a strength, given their significance due to differentiation within national systems of vocational education and training (Ashton and Maguire, 1986, Roberts et al, 1987, Rees et al, 1989). The research can also be seen as adding to reflections on research within different national systems of vocational education and training, such as those reported by Ryan (1991), Nijhof and Streumer (1994), Cressy and Jones (1995) and Koch and Reuling (1995).

The initial analyses of the local labour markets (Behrens and Brown, 1991, van der Aa and Nieuwenhuis, 1993) showed clear evidence of gendered occupational socialisation processes. The samples were therefore drawn to investigate this line of research further, particularly given the differential opportunities for progression (Herget et al, 1987, Wallace, 1994) and the way men's work aspirations have in the past spiralled upwards upon completion of initial skills development, while women's spiralled downwards, (Krüger, 1990, Stafford, 1991).

3. *Research objectives*

The research was designed to achieve the following:

- to provide a sustained, systematic and longitudinal comparative analysis of the processes, content and meanings of reaching experienced skilled worker status in England, Germany and the Netherlands

- to investigate the different patterning of formal and informal support for development of individuals through to experienced worker status (for example, through use of continuing education and training, work-based learning, coaching or programmes of continuous development)

- to consolidate the use of 'close matching' as a rigorous and grounded method for comparative analysis in education and training

- to develop process models of continuing education and training which highlight the different ways in which skill development occurs after completion initial skill formation (such models to be of interest to policy makers and practitioners)

- to show how a fuller understanding of the differentiated ways in which other national systems operate in practice gives a much more informed base for policy analysis and advice about skill formation processes in the UK, than generalised and over-simplified pictures of German and Dutch education and training.

4. *Methods*

The main focus of the research was upon the development of young adults (aged from approximately 16 through to 25), technically skilled in eight different occupational areas, through to experienced worker status in the broadly matched labour markets of Swindon, Paderborn and Eindhoven. The eight occupational areas (engineering, electrical, heating and ventilation, pharmacy dispensing, hairdressing, nursing, banking and insurance) were chosen to cover a mix of small/medium enterprises and large companies, different labour market sectors and stereotypical male, female and mixed occupational routes.

The skill formation processes in the different occupational areas were investigated with an innovative methodology of progressive close matching, whereby closely matched triplets of young people were selected for in-depth interviewing. This procedure, the basis of the comparative case analysis, delivered not only strong contextual similarities, but also a rigorous comparison of individual experiences within these contexts. Hence the processes, content and meanings of reaching experienced worker status can be examined by a sustained and systematic comparative analysis of the matched triplets, whose occupational backgrounds are rather similar. Extended interviews with the young people themselves were supplemented by interviews with a range of other key informants. From an iterative process of data collection and analysis detailed commentaries were generated on the socialisation processes and milieux, which underpin the development of young people as they move through to experienced worker status. Information from the large survey sample of the previous research and from study of the various occupational fields provided necessary background information on labour market processes and occupational developments. This has allowed development of a picture of progression, both from an individual career perspective and in relation to pathways through particular continuing education and training systems and labour markets.

In particular, close matching has allowed investigation of the different patterning of formal and informal support for development through to experienced worker status. That is, the relative contribution of formal continuing education and training, work-based learning, coaching, peer support, support of Meisters, supervisors or other key workers and programmes of continuous development has been investigated. From this process models of continuing education and training are being developed, which highlight the different ways in which skill development occurs after initial skill formation.

Methodological innovation

The 'close matching' described above is the latest in a line of methodological innovations in our comparative work. The initial broad matching methodology of Stage 1 (Bynner and Heinz, 1991), was further focused for Stage 2 (Evans and Heinz, 1994). The potential of 'close matching' had been established (Brown et al, 1991), but the

Stage 3 research provided the opportunity to see whether it could meet the challenge posed by Ragin (1991) of how to introduce greater rigour into comparative case analysis. The close matching process delivers strong contextual similarities, which then gives opportunities for a rigorous comparison of individual experiences within those contexts. This has to be supplemented with contextual analysis, but potentially it does give scope to highlight the interplay of structure and agency taking place in skill formation and development processes. The key point here is that previously many comparative contributions to policy debates have been too general and undifferentiated, and have been over-concerned with policy rather than 'policy in action'. The use of close matching to produce a rigorous comparative analysis of the effects of 'policy in action' gives a much firmer base from which to make **differentiated** policy proposals.

5. Results

The results are presented in a thematic way, drawing out and expanding upon the major themes arising from the research. The findings have been presented in a series of publications, but the separate strands are drawn together in the following commentary.

5.1 The role of key workers in moves towards the development of learning organisations

Note the argument outlined below is given in full in Brown et al (1994) and in summary form in Brown (1997a).

Aim: to see whether lessons can be learned from consideration of how support for the development of occupational competence is given in Germany and the Netherlands (and Japan, based on secondary analysis), which could inform moves towards the development of learning organisations in England.

Lessons from comparison:

- in Germany, coaching or supporting expertise is bedded in the structures of work, and are part of a system-wide 'training culture';

- in Holland, in the absence of system-wide support for the development of coaching expertise, one strand of the attempt by individual companies to promote a culture conducive to learning may be to link advancement within the company to an individual's progression in learning, including recognition of how successful they are in supporting the learning of others.

Conclusion

the 'key workers' who play a leading role in enhancing an organisation's skill capacity may be different (trainer, supervisor or working coach) in different contexts. From a longer-term perspective the facilitation of the development of working coaches within organisations is dependent upon three criteria. These criteria are: there has to be a mechanism that allows a prospective coach to develop the skills of guidance and support; coaches themselves have to exemplify a continuing commitment to learning; and the development of expertise as a coach needs to be reflected in career advancement and progression.

5.2 Designing learning programmes to promote a broad occupational competence

Note the argument outlined below is more fully developed in two recent publications (Brown et al, 1997; Brown 1998).

Aim: to address concerns of policy-makers in all three countries over whether current skill formation processes are equipping young people with the ability to adjust to changes in organisational structures, work processes and technological innovation, as well as with the individual flexibility to re-orient their career direction, if necessary. This is evident in worries that vocational education and training will be too narrowly focused upon particular conceptions of jobs and occupations, which are themselves changing, and in a consequent desire for 'breadth' to be an important theme in processes of skill formation.

Conclusions:

- the prime focus of the inter-relationship between education, training and employment needs to be upon learning, and learners need to develop effective learning strategies. This requires learners being given opportunities to improve their learning to learn skills, develop their core skills, and a variety of contexts in which to practise skill transfer.

- processes of review and critical reflection are pivotal, and that organised reflection on what has and what needs to be learned can act as a bridge between working and learning.
- the attention on the process skills underpinning the ability to be effective in different contexts does not diminish the need for mastery of a substantive occupational knowledge base. The development of process skills should ideally be embedded in appropriate occupational contexts. Further, mastery of a substantive knowledge base is not only central to the development of occupational expertise, but it also forms a platform for continuing learning in the future. [Critics of the German dual system sometimes consider too much emphasis is given to mastery of a knowledge base, which often gets rapidly out-of-date. However, what this overlooks is that mastery of a knowledge base does not just result in a product but itself requires a process, and this process has continuing value because it can have a confirming or transformative effect on the beliefs of young people that they can be effective learners.]

5.3 Debates about the future of vocational education in the Netherlands

The argument outlined below is given in full in the publication by van der Aa and Brown (1996).

The Dutch educational system could be characterised as hierarchical, with a clear order of higher and lower educational types, but coherent in that transfer was possible both horizontally and vertically (van der Ploeg, 1993). The system of vocational education is integrated into the overall system and has traditionally been overwhelmingly school-based. During the 1990s, there has been considerable pressure for reform of vocational education and training (Ministry of Education and Science, 1993), with the debate being dominated by whether to move to a (German-inspired) dual system. Administrative and financial issues have featured large in this debate, but our analysis (van der Aa and Brown, 1996) suggested that there is considerable value, for curricular reasons and to increase opportunities for progression, in adopting a more highly differentiated approach, that could encompass varied patterns and combinations of education, training and employment in different occupational areas. Recent evidence suggests the new qualification structure has allowed remarkable differences in actual implementation (Onstenk 1998), and as a consequence the pressure to make most vocational education and training fit a single template appears to have subsided.

5.4 Pressures for change and prospects for the future of vocational education and training in Germany

The argument outlined below is given in full in Brown (1996a).

The anchors that have given stability to the framework of vocational education and training in Germany for over forty years include: control over education by the individual states; key roles for the chambers, social partners and the federal state; the dual system; training of the trainers; specification of training regulations; general education continued as part of vocational education; forms of work organisation make extensive use of skilled workers; and clear links between companies' product market strategies and the type of workforce skills they require.

However, the German system of vocational education and training is now facing some key challenges. These include: poor progression prospects associated with some apprenticeships; lack of opportunities after age 20 to recover from initial failure; whether to differentiate types of apprenticeship qualifications by level, shifting attitudes of (large) employers towards the apprenticeship system; attempts to promote equivalence between general education and vocational tracks; and who will fill lower-middle technical and supervisory positions in future?

While the precise elements of a new consensus for the future direction of vocational education and training will need to be constructed, it is possible to identify a number of likely trends. The primacy of the largely firm-based route to skilled status will be increasingly challenged: experience of and learning at work remain important, but education-based 'blocks' of study will become much more significant. One response to the increased instability of both occupational and internal labour markets will be to look for different mixes in the ways skills are acquired and how learning can be targeted such that there is greater linkage and interaction between what is required in internal and occupational labour markets. There will be more flexibility in how people can mix different ways of acquiring skills, drawing on varying combinations of education-based learning and learning in the workplace, over time.

Even if it is not an explicit policy objective, one by-product of introducing more flexibility, and encouragement of vertical and horizontal mobility, into the vocational education and training system as a whole, will be to open up opportunities for progression to often well-qualified young women who find themselves in occupational cul-de-sacs, with poor long-term prospects.

The era of virtual complete domination of vocational education and training in Germany by the traditional firm-based dual system is coming to an end. In future, there is likely to be a greater variety in how vocational tracks are constituted, with greater linkages to higher education, higher level education and training and continuing education and training. The balance of time spent in education-based learning and learning in the workplace may shift more towards the former. The system as a whole will be more flexible, with greater emphasis on horizontal and vertical mobility. However, education and training driven by a clear occupational focus (a sense of 'Beruf') is likely to remain the choice of very large numbers of young people. It is just that, in future, it might be more accurate to portray this as a vocational academic track, based at different times and to differing degrees in work and education, rather than a primarily firm-based vocational track. Indeed there is a certain irony in that the decline in the supremacy of the firm-based dual system, with education as the junior partner, could mean that a future dual system more closely lives up to its name: with a more equal partnership between education and work in the delivery of vocational education and training.

5.5 Gender differences in processes of occupational progression

Note this line of argument was partly developed in Brown (1995a), but will be extended at some point in the future following further data analysis.

The choice of gender as the organising principle for the selection of different groups

flowed from the clear evidence in our previous work of gendered occupational socialisation processes (summarised in Wallace, 1994). In all three countries, there were structural constraints on opportunities for progression associated with becoming a nurse, hairdresser or a pharmacy dispensing assistant. This sometimes led some of the women's aspirations spiralling downwards (in line with the findings of Krüger, 1990). There was also some recognition of the work fitting with a classic female `dual career' orientation: that it would be possible later in life to work part-time to fit in with child-case responsibilities and/or return to work after a `break' from work (de Brujin, 1994), On the other hand, there were examples of individuals (English hairdresser; German pharmacy dispensing assistant) with very clear progressive occupational goals who were able to transcend the conventional constraints.

The opportunities for progression in the traditionally male areas (electricians, tool-makers and heating and ventilation technicians) were much more evident. Such opportunities related both to progression within work and opportunities for further education and training. All the male respondents who became established in a first skilled job were on a broadly upward path, with increasing responsibility in work and/or opportunities for promotion. Achieving that first established skilled post though could be problematic in all three countries. Analysis of systemic data, where this was readily available as in Germany, confirmed male domination of work-based routes leading through to technical and supervisory qualifications. Overall it is clear that skilled work and associated vocational training themselves play a broader socialisation role, whereby young people may come to accept the normative criteria associated with the prospect for progression in the occupation. This may lead to differential opportunities for further progression according to gender, but individual commitments too can play an important role in whether these constraints can be transcended (Brown, 1996b).

5.6 The development of work-based learning

Some of the themes outlined below were developed in earlier publications (Brown, 1995b; 1997b).

- increasing attention is being given to work-based learning, especially by large companies, particularly making use of action learning, project work and self learning, sometimes supported by systems of tutoring, mentoring, coaching and group work;

- in all three countries attempts have been made to encourage systematic reflection upon what has been learned through the use of assignments, work-based projects or Leittexte (guidance scripts);

- other workers not necessarily trainers or supervisors, can play a mentoring, support or coaching role to those developing their skills at work. Although in some cases, such workers lacked the necessary support skills for the help to be as effective as it might have been;

- in developing occupational expertise, those becoming skilled have to develop appropriate mental models or 'ways of thinking', and one key stage in achieving this is through the development of frameworks or networks which link together knowledge and ideas from different sub-areas or sets of activities;

- work-based learning experiences could range from the challenging to the rather sterile: efforts should therefore be made to create a workplace context that qualifies as a 'strong learning environment', where those working and learning are able to apply their developing skills, knowledge and understanding in different contexts;

- the value of work-based learning is established in some contexts, but a key question is how can these ideas be put into practice in other contexts;

- there could be considerable benefit from establishing a European infrastructure to facilitate networking between different initiatives, programmes and alliances aimed at the promotion of work-based learning: for example, in trying to forge 'alliances of learning' covering a wide range of companies in particular industries.

Informal support for on-the-job learning can be important in particular work contexts, as there is an expectation that much crucial learning will take place without formal instruction. This support role could be played by supervisor, trainer, more experienced worker or work colleague. Whether those in support roles had sufficient support skills to help others learn was itself an open question.

On-the-job learning was most successful when it allowed those developing their skills full participation in the communities of practice that form around work. This included access to all relevant aspects of practice: in relation to performance in a variety of contexts, building of relations with particular individuals and groups of people, as well as experience of processes, products and services involved in work. There are strong social dimensions to learning to be involved in a 'community of practice', linking as it does aspects of organisational and occupational socialisation.

5.7 Individual meanings of becoming skilled

While some of the results given above emphasise some of the structures and constraints within which people become skilled, there is still scope for individual agency (Brown, 1996b). For example, individual engagement with work activities could vary greatly, as could the strength of occupational attachment and the extent to which young people were proactive in the development of their own occupational identities (Brown, 1997b). Additionally, it was clear that individuals attached very different meanings to the whole process of becoming skilled, depending in part on how central making a commitment to a particular occupation was in the broader processes of developing an identity (Brown, 1996b): processes associated with 'making a life' could take precedence over what could be conceived as narrower concerns with 'making a living'.

5.8 Development of a dynamic model of occupational identity formation

Perhaps the most useful outcome of the research was the development of a dynamic model of occupational identity formation. This is summarised in Brown (1997c), with evidence in support of the arguments being offered in preceding publications (Brown 1996b; 1997b). The model is briefly outlined below, along with discussion of underlying theoretical commitments and other key features of the model.

6. A dynamic model of occupational identity formation

The processes whereby people become skilled are complex. The implicit model underlying common-sense thinking about skill acquisition is that there is a body of skills, knowledge and understanding that has to be mastered before someone can be considered skilled. This model highlights an important aspect of skill acquisition, but it makes the process appear as if it is a simple linear transmission process. This linear transmission process though can be problematised in a number of ways.

First, it is a static representation - it does not allow for changes to the body of skills, knowledge and understanding to be acquired. Nor does it recognise the longitudinal dimension to becoming skilled. That is, what it is to be skilled is different, to a smaller or greater extent, at the time you start on the process of becoming skilled from what it is when you formally complete the process.

Second, the social dimension of becoming skilled is not emphasised. The skills, knowledge and understanding that an individual develops over time are acquired in particular social settings. The social context in which learning takes places needs to be acknowledged. Individuals learn with and from others, and help others learn, and the significance of this means that the process of skill acquisition needs to be placed in a social context.

Third, the body of skills, knowledge and understanding to be mastered is represented as external to the individual. This does not allow for the individual to be an agent in the construction of her or his own particular set of skills and understandings that he or she acquires. That is, even if individuals are faced with a similar (changing) body of skills, knowledge and understanding, **how** they go about trying to achieve mastery of that body of skills, knowledge and understanding may be very different.

The most significant criticism though is that the focus upon becoming skilled could itself be regarded as too narrow in certain contexts. There is a need to ask the question 'for what purpose is someone seeking to become skilled?'. Immediately it can be seen that there is a difference between learning part of a body of skills, knowledge and understanding for the purposes of a hobby, as a means of securing part-time or occasional employment, or as a means of 'making a living' over an extended period of time. In the latter case, it may be more appropriate to focus upon processes of occupational identity formation.

The final additional dimension to a consideration of becoming skilled, in the context of acquiring an occupational identity, is that these processes will take place within particular 'communities of practice'. There may be a broad community of practice at the occupational level, but there will be more particular communities of practice associated with particular work organisations and education and training institutions in which skills are being developed. Indeed it may be that particular workgroups within an institution have typical ways of working that differentiate them to some extent from other groups.

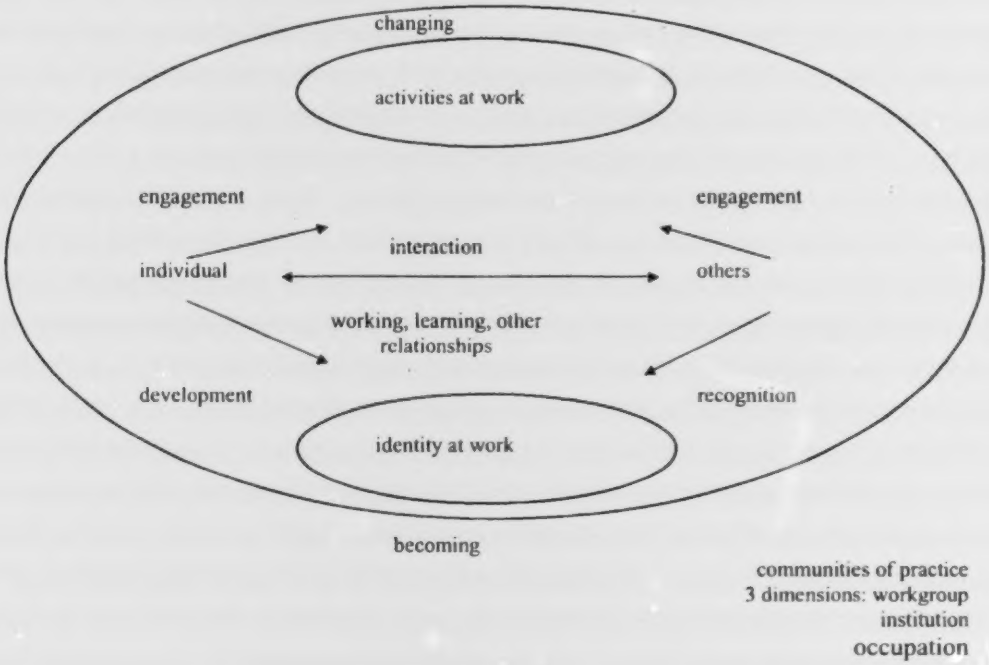
A dynamic model of occupational identity formation

From the above it is possible to identify to what is required from a more comprehensive model of occupational identity formation in particular work organisations. It has to:

- be a dynamic representation, allowing for change and development over time;
- have a strong social dimension, whereby an individual learns, works and interacts with others;
- allow the individual to be a significant actor in the construction of her or his own occupational identity;
- recognise the existence of general and particular 'communities of practice' associated with particular occupations and organisations, and acknowledge that these can operate at a number of levels.

Any model proposed needs not only an internal coherence, but also needs to engage with other theoretical propositions, if it is to offer a more general and comprehensive explanation. A diagrammatic representation of the proposed model is outlined in Figure 1.

Figure 1: Model of occupational identity formation



It is difficult to convey in two dimensions is the dynamic, developmental nature of the model. The sets of activities at work and communities of practice and the identities they support are all changing. It is important to remember that not all aspects of these activities, practices and identities are passively received by those engaging in them while in the process of becoming skilled. Rather the 'about to be qualified' and 'newly qualified' may play an important role in changing aspects of those activities, practices and identities. Indeed an understanding of such dynamism is required if a fundamental tension about occupational identity formation processes is to be recognised: that is, there is both continuity and change in how these processes work out over time.

Fundamental theoretical commitments underlying the model

Learning as a social process

An individual learns through interaction and communication with others. The process of learning though does not generate a single type of interaction. Rather learning takes place in contexts in which there may be multiple dimensions to the nature of the interactions: there may be a host of working and other relationships that have an influence upon the learning process. Individuals learn from a variety of sources and relationships. Not only are these relationships patterned differently, according to differences between individuals and contexts, but also the sheer variety in what, how and from whom learning occurs is sufficient to ensure there is not a linear transmission of learning. Changes in the particular constellations and configurations of influence and different patterns of relationships are sufficient to ensure that learning as experienced can differ significantly for different individuals even within broadly similar contexts. Thus learning is a social process, but with differential effects and outcomes on particular individuals.

The significance of developing an identity

When considering the formation of occupational identities, there are two traps for the unwary. The first is to assume a smooth transition into appropriate skilled work for those who complete their initial skill training. This concept of progressive career development has been unravelling since the 1980s. For example, Herget (1987) found that many newly qualified skilled workers in (West) Germany did not find work they considered matched their skills and qualifications. In some cases work would be found in a completely different occupation: in such circumstances the extent to which an individual feels he or she 'is' a skilled worker is problematic.

The second trap is in thinking that the occupation in which young people are training always has particular significance for them. A young person may attach far greater importance to 'developing an identity' in a broader sense than to developing a particular occupational commitment. The distinction could be portrayed as the difference between 'making a life' and 'making a living'. When expressed in that way, it can readily be seen that the former is of greater significance, and that the extent to which the latter (occupational) orientation is a central component of the former may vary between individuals and over time.

The net result of the above is that it is necessary to keep in mind the significance of developing a broad identity. An occupational identity being just one of a number of smaller identities that make up the overall identity of an individual.

Contested nature of experienced skilled worker status

The above arguments have indicated that the process of becoming skilled is a social activity, in which a number of others have an interest besides the individual directly concerned. While acknowledgement of formal status as a skilled worker may come through completion of an apprenticeship or similar status, both the individuals themselves and others may be wary of conferring the epithet 'fully skilled' at this time. That is, more likely to come when the individual and others recognise that he or she is an 'experienced skilled worker'. Indeed there will often be a negotiation of meaning, whereby you are only an experienced skilled worker when you yourself and others recognise you as such.

One clear sign of recognition comes when others (for example, clients, peers or trainees) turn to the individual for advice, because they acknowledge the individual possesses valued skill, knowledge, expertise or experience which is acquired over time. External recognition can also come from management, through job grading and/or the type of work allocated to the individual, or through the type of work he or she can get in the external labour market.

Acquisition of experienced skilled worker status is contested in the sense that it is not clear at what precise point of time an individual reaches this status and because it depends on judgements of a number of people, who may be using different criteria in forming their judgements. However, besides external recognition an individual also has to recognise the value of her or his own skills. That is, he or she has to have a sense of self worth and recognition of and a belief that he or she owns significant skills.

Entry into a community of practice

The ideas that:

- learning is a relational social process;
- that processes of becoming skilled take place within a broader process of identity formation;
- and that recognition of significant achievement (and attainment of the status of experienced practitioner) is itself a socially mediated (or contested) process, dependent on the recognition of others and a sense of self-worth

all fit with the idea that a dominant theme in occupational identity formation is entry into a community of practice. That is, individuals are developing occupational identities that need to be related to particular socially situated, contextually embedded practice.

Interdependence of structure and agency

There may be a danger that the idea of a community of practice is elevated to a position whereby the individual is seen as 'becoming' a practitioner, rather than just learning the practice, but it is still a matter of taking on identities and roles, which are pre-existent. Whereas in the proposed model, individuals may take a pro-active role in becoming a full participant in a changed community of practice, which has been partly changed by their efforts. Hence there is scope for individual agency to act upon the structures and processes in such a way so that a new community of practice develops.

Other key aspects of the model

Individual engagement with (changing) activities at work

Individuals learn how to engage in the activities at work in the way they do. Company management may have very clear ideas of what they considered to be appropriate ways for their skilled workers, and those in the process of becoming skilled, to engage with their work. Individuals may react very differently to such expectations, with behaviours ranging from complete rejection to complete engagement. Between these extremes newly skilled workers may exhibit a wide range of attitudes and behaviours in the extent to which they engage with the activities they perform at work (Brown, 1996b).

Development of individual identities at work

The technical possession of the requisite skills, knowledge, understanding and expertise necessary to be considered skilled is only one component to the development of an identity at work. One major distinction between young people becoming skilled was the extent to which they saw themselves as active in constructing their own identity, and in how they perceived their developing occupational identity. Some young people rather passively accepted their place at work: they saw themselves as likely to be doing broadly similar work with their current employer for the foreseeable future. They were not operating with any progressive notion of career, nor did they have any great expectations of work. Their identity at work seemed bound up with being an 'ordinary' (rather than a 'special') worker: doing the job steadily, without entertaining thoughts of promotion or changing employers. On the other hand, there were examples of young people who were actively constructing dynamic identities, in which occupational success was an important factor (Brown, 1996b).

Engagement of others with (changing) activities at work

The above has emphasised the significance of the extent to which an individual engages with work activities and the type of identity at work that he or she develops. However, the reaction of others can also have direct or indirect effects on perceptions that the individual and/or others have on that engagement and developing identity. This is perhaps most marked when the work activities are themselves changing rapidly. A 'battle' between 'old' and 'new' ways of working, and ways of engaging with work, is common at all times, but is given greater impetus when there is major organisational and/or technological change in a workplace. This 'battle' may be given added spice, if the proponents of the different views represent an 'old guard' and a 'new guard', trained in different ways and with differing sets of skills and attitudes.

Recognition of others in the development of individual identity at work

How they are perceived by other workgroup members, managers, other workers, trainees, clients and so on can all be influential in the formation of an occupational identity and an identity at work for an individual. The judgements of others may not necessarily be consistent and, even if they were, people may ascribe different values to particular characteristic. Thus a thorough painstaking approach to work may be appreciated by trainees and some clients ('conscientious; professional'), but be seen as irritating by managers and other clients ('too slow'). The recognition of others can help shape, confirm or contradict an individual's developing identity at work.

Interaction with others

The salience of the interaction between an individual and others in working, learning and other relationships is self-evident in any process of identity formation. The formation, development, maintenance and change of an occupational identity, and/or identities at work, are influenced by the nature of the relationships around which they are constructed. For example, recently skilled workers may still require the explicit support, encouragement and advice from their peers to reach the standard expected of experienced skilled workers in that company (Brown, 1996b).

Communities of practice

That individuals who became formally skilled were in the process of entering an occupational community of practice was most evident in Germany, where the whole initial vocational education and training system is driven by the principle of 'Beruf' (Reuling, 1998). However, within school-based initial vocational education and training the de facto community of practice within which the individual spends most time is the school, college or training institution. As a consequence, individuals may feel that they are still a considerable way from acquiring the full occupational identity in such circumstances, even if they are technically well-equipped to carry out the required work tasks.

Individual organisations can have their own distinctive communities of practice around which they structure their work activities and which influence their attitudes to training. Particular workgroups may have their own distinctive community of practice too. This is perhaps likely to be strongest where a specialist group is set up within a larger organisation, with people from a mix of occupational backgrounds, a different set of work activities and a different pattern of inter-relationships with other work groups. Such groups may consciously define themselves as 'special' (Brown, 1996b).

Concluding discussion

From the above it is clear that the overall model looks as if it can handle a number of key tensions in any attempted explanation of occupational identity formation. In particular it looks as if it can cope with the tensions that:

- there are elements of continuity and change over time in the processes whereby occupational identities are formed;
- the individual is a significant actor in the construction of her or his own occupational identity, but the process is not wholly subjective. On the other hand, individuals and their interactions with others are partly constrained by the structures and processes of the communities of practice in which they take place, but that these interactions over time may lead to the development of changed communities of practice;
- occupational identities vary in the intensity with which they are held, and in the significance individuals ascribe to them. That is, while they are central to our research, they may or may not be of great significance to the individuals we are tracking. On the other hand, the broader process of identity formation in the sense of 'making a life' is fundamental to all individuals.

Additionally the model fits well with an existing coherent theoretical framework, as put forward by Lave (1991) in 'Situated Learning in Communities of Practice'. Her general ideas [of:

- changing knowledgeable skill being subsumed in the process of changing identity in and through membership of a community of practice;
- situated social practice emphasising interdependency of agent and world;

- activity, meaning, cognition, learning and knowing being underpinned by inherent processes of social negotiation of meaning within a socially and culturally structured world;

- the way newcomers become old-timers as they develop a changing understanding of 'practice' through participation in an ongoing community of practice;

- the changing relationships of newcomers to ongoing activities and other participants]

all serve to ensure that the focus is upon a dynamic process. The model proposed can therefore be used as a tool for analysing longitudinal data on the processes of skill formation and of the way occupational identities develop and how these change over time.

7. *Future research priorities*

There are a number of lines of research arising from this project which might profitably be pursued:

i comparative research upon constructing and exemplifying a number of 'ideal types' of successful transitions through to experienced skilled worker status. This could be directed at improving our theoretical understanding of the processes of learning as they relate to individual navigation through structures and opportunities in education, training and employment.

ii research into processes of continuing education and training has traditionally had either an individualist or an organisational focus. One way forward may be to look for a reconciliation of ideas based upon the development of skills, knowledge and understanding of individuals with arguments emphasising the social context of learning within organisations and the importance of learning by groups and the organisation itself. For example, one area of investigation could be the relationship between formal and informal support in the development of individuals and organisations with a continuing commitment to learning. Such an enquiry would highlight the need to focus upon learning processes across a range of contexts.

iii technical questions about how to make work-based learning effective in particular organisational contexts have largely been addressed or are subject to current research. Some broader questions, however, still need to be answered:

- is it possible to forge 'alliances of learning' that cover a wide range of companies in particular industries?
- what are the implications for access and equity of the increasing bifurcation between different sets of individuals, groups and organisations according to their access to and/or commitment towards work-based learning?

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2. Comparisons of Post-16 Education Strategies to Promote Parity of Esteem Between Vocational and General Education in Europe[111]

Dr Johanna Lasonen and Professor David Raffe

Introduction

The Leonardo da Vinci Post-16 Strategies project was a partnership of eleven institutes operating in eight European countries. It ran for two years, from December 1995 to November 1997. The aim of the project was to survey and analyse recent or forthcoming post-16 education reforms within eight European upper secondary educational systems. The reforms to be analysed were selected with a view to capturing those key topics, phenomena and issues that may be considered to have the potential to turn educational trends into directions leading towards parity of esteem. This paper discusses the project and its methodology, and identifies issues which may be relevant to future research.

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The Post-16 Reforms, Their Contexts and Strategies

Context of the Reforms: Common Educational, Social and Economic Trends

The post-16 reforms studied by the project respond to problems and pressures that are similar in all eight countries, and that in many cases reflect educational, social and economic trends that are global in character. In nearly all countries, participation in post-compulsory education and training has increased. There has been a credentialist spiral: young people have stayed on longer in education to achieve the positional advantage conferred by higher levels of education. There has been a process of academic drift, that is, young people have increasingly demanded the higher-status general or 'academic' programmes which confer most positional advantage. In most countries the demand for vocational programmes, especially for those which do not lead to higher education, has declined in relative and sometimes in absolute terms. Expansion and academic drift have exposed or exacerbated existing weaknesses of post-compulsory education and training. The 'new' participants in education represent a wide range of needs and abilities, and many are not well catered for by existing provision. Many vocational programmes suffer from low status and from outdated curricula and pedagogy. Links between vocational schools and enterprises are often poor. Expansion has also revealed the inadequacy of progression pathways: programmes which have traditionally prepared for direct entry to the labour market may provide few opportunities for young people wishing to prolong their education. Dead ends have become more visible. Expansion has increased the complexity as well as the scale of post-compulsory education and training systems; they must meet a wider and more complex set of demands and expectations, and coherence, flexibility and responsiveness become increasingly important.

Society has become more 'individualised'; students expect a wider choice of courses and want to be able to negotiate flexible pathways through education. Economic changes have created a demand both for higher levels of attainment and for new kinds of skill, especially generic and overarching competencies, and for their wide distribution across the population. Growing inequalities and the increased risk of social and economic exclusion have created new problems in respect of low-achieving students who may be marginalised by the expansion of education itself.

These trends are mediated by the specific history and institutions of each country, and the specific problems to which they give rise may vary across countries; but they reflect global trends and are broadly similar across Europe. They create problems and challenges for post-compulsory education and training systems.

Objectives of the Reforms

In response to these problems countries have introduced reform programmes whose objectives include:

- to raise levels of attainment;
- to enhance opportunities for lower-attaining and less advantaged students;
- to increase the attractiveness of these opportunities, and to promote parity of esteem;
- to improve progression opportunities;
- to modernise the curriculum and to promote 'general' skills and knowledge, including key or core skills;
- to promote equality;
- to decentralise the system and to increase its flexibility and responsiveness; and
- to rationalise the system and to make it more transparent.

The Leonardo project has studied reforms which aim to achieve parity of esteem between vocational and general education, but all these reforms pursue most, if not all, of the objectives listed above. It is therefore remarkable that they appear to be pursuing these objectives through very different strategies.

The Reform Measures Studied in the Project

Despite the similar context and objectives of the reforms, the specific measures they adopted varied widely. Their main features were as follows:

Austria. In Austria there are four main tracks through upper secondary education: academic schools, higher vocational colleges, intermediate vocational colleges and the dual system. Current reforms focus on the last two of these. The curriculum is being broadened, updated, and extended to new occupational fields. New qualifications arrangements will give all vocational students, including those in the dual system, the opportunity to qualify for higher education. *Fachhochschulen* (vocational HE institutions) were introduced in the early 1990s and these are gradually being expanded to provide a progression route for vocational students. There are concurrent reforms in the traditional universities.

England. The Dearing Review of 16-19 Qualifications proposed reforms to clarify the purposes, reduce the overlap and enhance the distinctiveness of each of the three 'pathways' (academic, applied and vocational). It also proposed a number of measures to link or bridge the pathways. These included common nomenclature, levels and quality assurance procedures for the three pathways, overarching diplomas, a restructuring of courses into smaller units or groups of units to promote mixing and transfer between pathways, the promotion of key (core) skills across all three pathways, and the merger of the main bodies regulating the different pathways. The Labour government elected in 1997 has expressed broad support for the Dearing recommendations but at the time of writing is preparing to consult on the specific next steps.

Finland. In Finland upper secondary education is provided in two types of school, general and vocational. In 1992 experimental reforms were started in 16 local networks of schools. Each network comprises both types of schools and collaborates on joint scheduling and the co-operative provision of programmes. Students are encouraged to select a proportion of their programmes from other schools in the network, thus bridging the academic/vocational divide.

France. In 1985 France introduced the *Baccalauréat professionnel*, a Vocational Bac, alongside the existing General and Technological Bacs, with substantial common content. The *Bac Prof* is designed primarily for students who have embarked on lower-level (CAP/BEP) vocational courses at 15, and thus extends the progression opportunities in vocational education. It also confers entitlement to higher education, although a majority of its graduates enter the labour market. In the 1990s the other

Bacs have been reformed to promote flexibility, to cater for the greater diversity of students and to reduce the hierarchy among them.

Germany. In contrast to the other countries, there are only a few national reform programmes with similar objectives in Germany. The Leonardo project focused on bottom-up, process-oriented reforms to the dual system, and in particular on the Schwarze Pumpe project in Brandenburg which has modernised the curriculum and pedagogy to take account of changes in society and the workplace and to integrate general and vocational education. The Schwarze Pumpe project has sought to develop closer collaborative links between vocational schools and enterprises participating in the dual system, and to qualify young people for higher education as well as for employment.

Norway. The Norwegian Reform -94 brought general and vocational upper secondary schools together in new combined (or comprehensive) schools, increasing the general education component of vocational courses. It rationalised first-year courses, and remedied the shortage of places on second- and third-year courses. It made the pathways through the system more flexible by broadening the second-year options available to students completing a given first-year course, and likewise in the third year. It introduced a '2+' model for vocational courses, which allowed students after two years of school-based study to choose between a further year of training or two years of training combined with productive work. It developed new pathways from vocational education to higher education.

Scotland. In 1999 a 'unified curriculum and assessment system' will replace nearly all provision for adults and young people beyond 16 years, except for higher education and work-based training. It will incorporate general (academic) and vocational courses in a single framework of 40-hour units, usually grouped into 160-hour courses, available at five levels. The system is designed to have flexible entry and exit points. Most students will have a relatively free choice of courses, although they may choose to take combinations of subjects which lead to specified group awards. Common principles of curriculum design, assessment and certification will apply throughout the system.

Sweden. In Sweden, where an earlier reform had established integrated upper secondary schools, reforms in 1994 replaced the previous structure of general and vocational programmes, of varying length, with a system based on 16 national three-year programmes. Two programmes (natural and social sciences) focus on university entry; the other 14 are more vocationally oriented but also give access, at least in principle, to higher education. For these programmes at least 15% of study time is provided in the workplace. There is substantial common content, and all programmes include the same eight core courses or modules; the system is intended to facilitate transfer between programmes or from an 'individual' (self-chosen) programme to a national one. All young people up to 20 years have an entitlement to education within the system. The reform has also decentralised education and increased the autonomy of localities and of institutions.

The Strategies

Our analyses in the first two stages of the project, described below, concluded that these national reform programmes represented four distinct strategies:

- *Vocational enhancement:* enhancing vocational education, and making it more attractive to potential students, through measures which maintain and strengthen its distinctive ethos and its separateness from general education;

- *Mutual enrichment:* enhancing both vocational and general education through measures which allow each to draw on the best features of the other. This strategy brings the two types of education closer to each other but maintains a distinct identity for each;

- *Linkages:* giving vocational and general education the same formal status, and linking them through such measures as a common certification framework, arrangements for credit recognition and transfer, and common curricular elements;

- *Unified system:* abolishing the distinction between vocational and general education by combining them within a unified system and developing a curriculum which integrates the two.

We suggested that these four strategies were exemplified respectively by the reforms in Austria and Germany (vocational enhancement), in Finland and Norway (mutual enrichment), in England and France (linkages) and in Scotland and Sweden (unified system). We recognised that each country's reform programme might include elements of different strategies, and that the emphasis of a country's policy could change over time. We suggested that the four strategies represented a continuum between approaches based on the distinctiveness of academic and vocational education and those based on their full integration, with linkages and mutual enrichment as intermediate strategies between the two poles.

The Methodology of the Post-16 Strategies Project

Stages of the Project

The project lasted two years, which meant that the activities had to be co-ordinated within a tight time schedule. They comprised several stages:

Stage 1: Preparation of National Reports. In the first stage partners worked as national teams. Each team prepared a report on recent, ongoing and forthcoming reforms which aimed to improve parity of esteem between vocational and general post-16 education in their country. Each report analysed the strategy underlying the reforms, and related it to the national educational system and its social, economic and political context. It also identified issues for further study in the project. This stage culminated in the project's first workshop, where each national report was presented for discussion among members of the partnership. The national reports were subsequently revised and published in the project's interim report (Lasonen, 1996).

Stage 2: Development of a Comparative Conceptual Framework. The same workshop began the process of moving from analysis on the national level to comparative analysis. A 'brainstorming' session identified six priority themes which were common to the different national reforms:

- parity of esteem;
- the labour market context (matching VET provision to labour market needs, future skills, lifelong learning, core/key/transferable skills);

- the features of the educational system emphasised by the reform, and the model of change;

- local networking/linking between schools, and between schools and working life, to find new forms of learning for future skills;

- teacher education or/and teachers' co-operation in support of the reforms; and

- qualifications, curriculum development, and the flexibility of student programmes.

The next collaborative writing task proceeded in two stages. First, each national team prepared a brief report which analysed its country's reform strategy in relation to the six themes. These reports were then analysed by pairs of partners representing two different countries, leading to a comparative synthesis of one of the six themes. These syntheses were presented in round-table discussions at the second project workshop. At the same workshop the partnership provisionally identified the above-mentioned four strategies as a basis for analysing the differences and similarities of the reform approaches in the eight countries (Raffe, 1996). Thus, by the end of stage 2 the project had developed the comparative conceptual framework which was to underpin the remaining stages of the project.

Stage 3: Study Visits. In the next stage, which ran concurrently with stage 4, representatives of schools in partner countries which were involved in the national reforms, for example as experimental or pilot schools, made reciprocal visits. The choice of partner country to visit was guided by the comparative analyses of stage 2, and the reports of the exchanges fed back into the later analyses of strategies.

Stage 4: Application and Testing of the Comparative Framework: Preparation of Strategy Reports. In the next stage of the project partners worked in two-country teams, drawn from countries pursuing the same strategy. Each team wrote a report on the strategy being followed in their countries. Each report described the aims, objectives and rationale of the strategy and placed it in the context of the national systems where it was being pursued. It discussed the practical issues involved in and problems encountered by the strategy, and reported on its progress and outcomes where the reforms had been in operation for long enough for these to be known. Early drafts of the strategy reports were discussed in round-table sessions at the third workshop of the project. This workshop identified several themes or issues that were raised by each strategy paper; it was agreed that the papers should be revised to take explicit account of these themes, thus enhancing the comparability of their coverage and analytical approach. The revised strategy papers were discussed at the fourth and final workshop. The final versions are included in the final report of the project (Lasonen & Young, 1998).

Stage 5: Application and Testing of the Comparative Framework: Cross-Strategy Analyses and Comparisons. In much the same way that the preparation of the national reports (stage 1) provided the basis for cross-national analyses (stage 2), the strategy reports (stage 4) laid the groundwork for cross-strategy analyses (stage 5). These cross-strategy analyses comprised several elements:

- As described above (stage 4), when the first drafts of the strategy papers were discussed alongside each other, it was possible to identify common themes which could be more explicitly addressed, and in comparable fashion, in subsequent drafts.

- The revised drafts of the strategy papers formed the basis of a round-table discussion at the final workshop. The partners reviewed the four strategies and sought to draw both conceptual and practical conclusions from the comparisons. This discussion was introduced by a draft paper, a revised version of which is included in the final report (Young & Raffe, 1998).

- Each national team prepared a commentary on each of the other strategies. This commentary raised questions about the strategy and identified lessons for the team's own country. A synthesis of these lessons is included in the final report (Lasonen, 1998).

- Each national team mapped its strategy against a common conceptual grid of 18 dimensions. These were subsequently analysed comparatively in relation to the four strategies, and this analysis together with the national mappings is included in the final report.

- All these various elements are synthesised in the conclusions of the final report (Young & Lasonen, 1998).

- Individual partners have prepared syntheses from their own perspectives, often in relation to their own national contexts. For example, one of us has summarised his views on the project findings both from a 'European' perspective and from a Scottish one (Raffe, 1997a, 1997b).

Key Features of the Project's Methodology

Several distinctive features of the project's methodology related to its collaborative aspects:

(1) The partnership as such, the project team as a collective, has been an essential aspect of the project. The team has collaboratively defined generative classifications, made decisions on joint collaborative writing tasks and constructed a picture of policy settings for promoting parity of esteem.

(2) Each team 'represented' one of the eight educational systems by providing data on the system and its current reforms, by preparing a national report and by explaining the system and interpreting the data to the other teams.

(3) The project alternated between two modes: in stages 1 and 4 partners worked as national or bi-national teams to prepare reports on their own country's strategies, while in stages 2 and 5 comparative analyses were conducted by teams representing different countries and strategies.

(4) There was a wide mix of disciplines within the project, and the teams included teacher educators and administrators as well as researchers. Pilot schools were also involved, but the degree of collaboration between the researchers and pilot schools varied.

(5) The outcomes of the project have been produced in and through a collaborative writing process based on team members' expertise and previous studies.

Methods and Procedures: Structured Collaborative Writing

To ensure that a multicultural research team achieves efficient and productive collaboration, it was sensible to establish working methods that enabled all parties to make an equal and reciprocal attempt to understand each others' educational systems. The multicultural nature of the partner team involved on the one hand the representation of different nations in it and on the other hand co-operation between producers and consumers of knowledge. Figure 1 presents the aims of the project's collaborative activities and the means used to approach them.

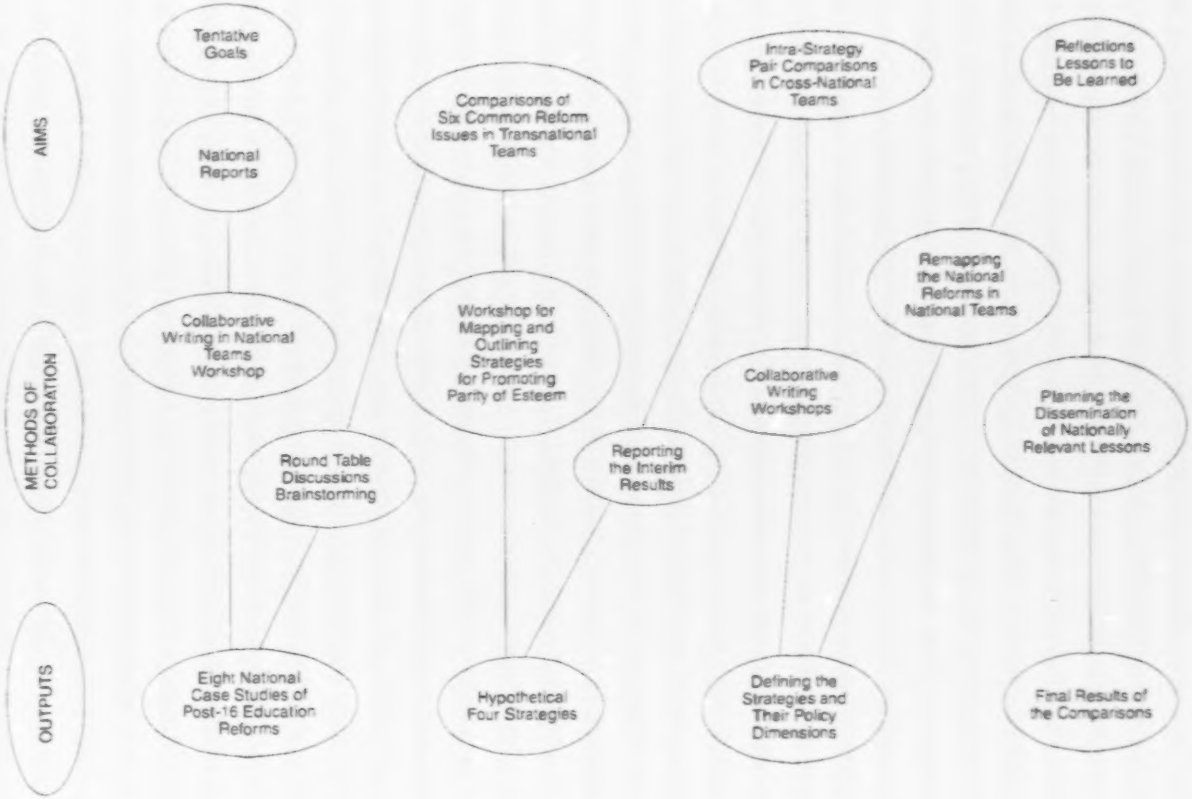
AIMS
METHODS OF COLLABORATION
OUTPUTS
Tentative Goals
National Reports
Comparisons of Six Common Reform Issues in Transnational Teams
Intra-Strategy Pair Comparisons in Cross-National Teams
Reflections Lessons to Be Learned
Collaborative Writing in National Teams Workshop
Round Table Discussions Brainstorming
Workshop for Mapping and Outlining Strategies for Promoting Parity of Esteem
Reporting the Interim Results
Collaborative Writing Workshops
Remapping the National Reforms in National Teams
Planning the Dissemination of Nationally Relevant Lessons
Eight National Case Studies of Post-16 Education Reforms
Hypothetical Four Strategies
Defining the Strategies and Their Policy Dimensions
Final Results of the Comparisons

Figure 1. *Aims and Means of Collaboration for the Post-16 Strategies Project in 1995-1997* (Lasonen, 1998)

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The principal method chosen to carry out the project was that of *a structured collaborative writing process* where an interdisciplinary and international team of experts works out the results of its analysis in and through writing. This process advanced in stages according to collectively agreed tasks. Collaborative writing is based on the assumption that knowledge of European educational phenomena emerges in social interaction. Mutual learning through collaborative writing is a social endeavour.

Reflecting the strong social dimension of its approach to its subject, the project was organised around *joint workshops* where the European partners presented papers and engaged in round-table discussions and brainstorming sessions. Round-table discussions helped the collaborators to make comparisons and draw conclusions. The meetings of such a multidimensional team were intense. Their organisation was based on tasks defined in each working seminar for the period following it. Each meeting of the partners opened a new phase in the ongoing implementation of the project.

Information dissemination has been seen as one of the project's modes of action, as shown by Table 1.

Table 1. *Functions of the Dissemination Activities by Their Scope* (Lasonen, 1998)

Scope of dissemination	**Project work**	
	Initial phase	**Final phase**
Internal dissemination	Creating an identity for the partnership Outlining the common goals	Inter-strategy comparisons Reflections Mutual learning
National dissemination	Establishing national networks Informing the target groups of the project Making study visits	Discussing good practices to be transferred to different target groups
International dissemination	Establishing relevant cross-project collaboration Surveying forums for presentations and articles	Adjusting the project to the framework of European VETresearch Communicating with international audience

The internal dissemination procedures of the project were process-oriented and open. The external dissemination of its findings focused on national and international target groups which helped to assess the project's significance and to place it in its national and international contexts. In the different stages of the project dissemination activities served the project and its target groups in different ways.

The study visits, if only to a limited degree, added a third dimension of co-operation, that between those who took and those who implemented decisions about educational policies. Study visits also made the project known in the schools involved. They thus promoted national and international dissemination of the relevant information (see Table 1).

A transnational approach of this kind, which might also be characterised as a constructionist approach based on comparative case studies, was found to have some advantages. Some of the methodological issues will be discussed below.

Conclusions of the Project

The project did not lead to any definitive conclusions. Different partners have drawn conclusions relating to their own interests, their own frames of reference, and their own national situations.

Conceptualising the Strategies

We found considerable differences between reforms following the same strategy, as well as between those following different strategies. This partly reflected the methodology of the study: the analysis of each strategy was based on the two countries pursuing that strategy, and there was a tendency to compare the two countries with each other (and thus identify differences) rather than with countries pursuing other strategies. It may have also been reflected the way in which we had allocated countries to strategies; for example, we initially classified the strategy in Norway as mutual enrichment, but we later concluded that it was closer to our concept of a unified system. The analyses confirmed the value of the concept of strategies, but suggested that we might need to revise or extend the particular typology of strategies with which we had worked.

One possible way to view post-16 strategies is as a continuum, from *track-based* (or vocational enhancement) strategies which emphasise the separateness and distinctiveness of vocational education, to *unified system* strategies which seek to integrate vocational and general education (Raffe et al., 1998a, 1998b). In the middle of this continuum are various strategies for *linkages* between tracks. This continuum can be described for several different dimensions of change (such as curriculum, certification, institutions), and a country's strategy can vary across these dimensions. Another possible conceptualisation proposes that strategies may be judged in relation to 'connectivity' as well as in relation to the continuum of unification described above (Young & Volanen, 1998).

Trends

Given this re-interpretation of our conceptual framework, we can draw a number of provisional conclusions about current trends.

- Each country's choice of strategy depends more on the character of its educational system and its social and economic context than on the objectives of the given reform; indeed, as we have seen, all the reforms had similar objectives. The factors influencing the choice of strategy include the size and the degree of centralisation of the educational system, the strength of vocational education and training, and their school- or work-based nature.

- Only countries with strong vocational education tracks - and, probably, only countries with dual systems and the relative insulation of vocational education that this provides - can pursue effective track-based (or vocational enhancement) strategies.

- In countries which do not have dual systems, the trend is to move either from a track-based to a linked system or from a linked system to a unified one. In some countries this is a continuing evolutionary process. Most systems are thus moving in the direction of a unified system, even if they are starting from different points and moving at different speeds, for different distances and along different dimensions of change. This is not necessarily convergence - systems may move in the same direction but the distance between them may increase.

Effects of Strategies and Lessons for Other Countries

Finally, what conclusions can we draw about the effectiveness of different strategies or about practical lessons which countries may learn from each other? Here we must be cautious: as yet there is insufficient evidence with which to judge most of the reforms covered by this study. Our very provisional conclusions are as follows:

- No one strategy is superior or more effective than the others in an absolute sense; the effects of each strategy must be judged in relation to the educational system and the context in which it was introduced.

- The project has identified many practical lessons which allow countries to learn from experience gained elsewhere, but these tend to be specific to the country which is learning the lesson (Lasonen, 1998). This means that the project's findings need to be communicated (and tailored) to policy and practitioner audiences at country level, as well as at EU level.

- A country may learn most from countries pursuing the same strategy, but it may also learn from other countries. For example, Scotland can learn the most direct lessons from Norway and Sweden, which are also introducing unified systems; but it can also learn from other countries, such as Germany which, despite its track-based strategy, may have the most radical approach to the integration of general and vocational curricula and pedagogy within the vocational track.

- As is usually the case with comparative research, one of the most important practical lessons from the comparison is a better understanding of one•s own country, and of the strategy it is pursuing.

- Finally, parity of esteem in the strict sense is an unrealistic and unobtainable goal. For as long as vocational programmes in upper secondary education lead to lower-paid and lower-status occupations than general education, we cannot expect them to enjoy parity of esteem. There is no evidence from any of the countries of a significant move towards parity of esteem, as reflected by (for example) greater similarity in the social or educational backgrounds of vocational and general students. The most immediate objective of many of the reforms is to reduce academic drift, that is, to halt (or at least to slow down) the trend for participation in general and high-status routes to increase at the expense of the vocational and lower-status ones. Reducing academic drift is also a difficult goal, but it is at least an achievable one. If future policies were framed with objectives that are achievable, there would be less frustration at the failure of policy, and the task of policy analysis would acquire greater clarity.

Limitations and Problems of the Research Approach

Finally, we considered three sets of issues arising from the research approach followed in the Post-16 Strategies project, from which lessons may be drawn for future projects. These issues respectively concerned the collaborative nature of the research, co-ordination and administrative aspects, and the nature of the comparative method.

Collaboration

Collaboration was central to the research approach, which depended upon research teams to represent their own countries' systems and reforms, to compare and debate these at the workshops, and then to re-group as cross-national teams for the purpose of comparison and further analysis. The structured writing process was founded on social interaction. If the teams in a successful partnership are to work well together, they must have enough in common in terms of methodology, experience and disciplinary background, and in terms of working styles and organisation; but they must be sufficiently diverse if they are to bring complementary expertise to the partnership. The teams must also have time to learn about each other. This process of mutual learning is fundamental to the success of a collaborative partnership. Partners must not only learn about the other educational systems; they must also learn about the teams who are responsible for presenting and interpreting each system, and whose knowledge, interests and perceptions will 'filter' the data on each system that is fed into the project. Partners must have time to develop shared concepts and frameworks, and to reach agreement on the goals and objectives of the research.

The international composition and diversity of the collaboration team was an important aspect of the project. However, gaining mutual understanding, working towards shared goals and exploiting the results of mutual learning take longer than two years, especially when partners devote only a fraction of their time to the project. To achieve the chosen goals it is essential to create and pick meaningful and effective working and communication methods geared to the needs of a multilingual and multicultural collaboration. The collaborative methodology of the Post-16 Strategies project was designed to meet these needs, but could only do so partially. It was difficult for all members of the partnership to contribute on equal terms: those partners who had previously worked with each other, and those who found it easier to communicate in English, were able to play a fuller role than others in establishing the goals of the project, especially in the crucial early stages. It is particularly important that all members of the partnership contribute to, and 'own', the main conceptual framework on which a project is based. In the Post-16 Strategies project there was limited time for this.

Coordination and Administration

The project advanced according to a jointly agreed schedule shared by all team members and through collaborative writing in cross-national teams. There were some problems with the partners' differing degrees of commitment to collaboration and, as a result, with the distribution of the workload. More time would have been needed for condensing the great amount of text generated during the collaborative writing process.

Despite the collective nature of decision-making in the project, which involved all the research teams in a project with 11 teams and eight countries, the role of Project Coordinator was critical. However, much of the Co-ordinator's time had to be devoted to coping with the burdens of administration imposed by the programme. Leonardo's administrative demands are heavy, especially, but not only, for project co-ordinators; in our view they are excessive, and heavier than in other national and European programmes that we have experienced. Leonardo's excessive administrative demands thus not only reduce the effectiveness of existing projects, but also discourage researchers from participating in the programme.

The Comparative Method

In this project 'surveys and analyses' did not refer to survey studies of first-hand empirical data but to transmitting a general picture or drawing a map of a number of educational reforms, and to detailed interactive and iterative comparisons of the common themes and issues involved in those reforms and strategies. As the project advanced and the collaborators became aware of each others' areas of expertise and expectations, their discussion could have turned to the use of action-oriented evaluation methods such as accompanying research. However, shared experiences were not exploited to evaluate the results of reforms implemented in the pilot schools. Instead, the interdisciplinary expert team has assessed national educational policies, analysing reforms in national post-16 education systems arising from varying economic, cultural and social contexts.

This focus on the national level of analysis had a number of implications. In the first place it restricted the number of 'degrees of freedom' for the comparison. For example, with only two countries for each strategy, it was not possible analytically to separate the effects of different strategies from factors more specific to the countries concerned. The national focus of analysis also restricted the project•s flexibility; in particular, it was not possible to select for comparison reforms which were at comparable stages of development or implementation. Had the project studied local reforms, this might have been possible, as there would have been more of such reforms to choose from. Only in three of the eight countries studied (Finland, France and Germany) were the reforms sufficiently long-established for reliable evidence on their outcomes to be available; in Norway and Sweden the first students were only half-way through the new programmes when the project began, while in the other three countries the reforms were either very recent or had not yet been implemented. The project could not therefore compare the outcomes of the reforms; it focused on the strategies underlying them, on the contexts of these strategies and on the rationales for adopting them. These were very important issues to understand in the current stage of policy development, and it was possible to compare strategic and practical issues raised by policies at different stages of development. However, we hope that in due course it will be possible to build on the work of the Post-16 Strategies project with further research which compares the effects of the different strategies.

A cross-national project provides an opportunity for intellectual transfer between research cultures. The mutual learning described above must cover national research traditions as well as research teams and the systems they represent. However, a team may prefer to work mainly within its own national research tradition, partly because it is most comfortable with this, but also because this tradition is best able to address the particular problems and issues that concern that country. We noted earlier that many of the practical lessons from the project were specific to the country which is learning the lesson. In some respects the main product of the project is not a single set of conclusions underpinned by a single conceptual framework, but a cross-national bank of data and ideas to which researchers from different countries can apply their own theoretical and conceptual frameworks to reach conclusions that are relevant to their own countries - as well as at the European level.

Cross-national research is therefore about diversity of research approaches as well as about diversity in educational systems and policies. Nevertheless, cross-national research can also demonstrate the common or similar features of different countries. In comparative research there is sometimes a tendency to focus on differences and to ignore similarities. For example, the reports on each strategy tended to focus on the differences between the two countries pursuing each strategy, rather than on the factors which they had in common. But one of the most useful contributions of cross-national research may be to identify similarities rather than differences: for example, the extent to which the problem of 'parity' arises from common, cross-national trends. As we build the Europe of the future it is at least as important to discover what we have in common, as the differences among us.

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The Partnership

A - Institute for Industrial Sciences (IWI) and Institute for Vocational and Adult Education Research (IBE); D - Institute for Technology and Education (ITB); F - International Centre of Pedagogical Studies (CIEP) and National Institute for Pedagogical Research (INRP); FIN - Institute for Educational Research (IER); N - Agder College; S - National Agency for Education; England and Scotland, UK - Post-16 Education Centre, Centre for Educational Sociology (CES) and Scottish Qualification Authority (SQA)

3 Growing Skills in Europe: the changing skill profiles of France, Germany, Netherlands, Portugal, Sweden and the UK

Åsa Murray[112], Hilary Steedman[113]

Abstract

This paper uses Labour Force and other national survey data to examine stock levels and changes in the stock of skills (educational and vocational qualifications) of the population over the period 1985-1996 for six European countries with particular reference to the low-skilled. National qualifications are classified using the International

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Standard Classification of Education (ISCED) levels 0-7. The low-skilled are defined as those who left education and training/gained no qualifications beyond the period of compulsory schooling.

Younger (25-28) populations are better qualified than the working-age populations. All countries have reduced the proportion in the low-skilled group over the period 1985-1996; however, countries which already had the lowest levels of low skills (Sweden, Germany) made the fastest progress. Considerable differences still remain between countries in stocks of skills in both the young (25-28) and working-age population. These differences are greater at the lower end of the ISCED scale (0/1/2) than at the higher end (ISCED 5/6/7).

In a number of countries (France, Germany, Netherlands, Portugal) higher level educational and vocational qualifications (ISCED 3 and above) were gained at a relatively late age (22-25). In Sweden and the UK only small proportions of the low-skilled gained further qualifications after the age of 21.

Proportions of low-skilled men and women in the working-age population have declined at similar rates in all countries but in Germany and the UK the proportion of women with low skills remains substantially higher. In France, Portugal and Sweden more women have a higher education (ISCED 5/6/7) than men. In Germany, the UK and the Netherlands the situation is reversed and the gap between men and women has remained largely unchanged over the period 1985-1996.

On the basis of the growth rates of the past ten years, France, the Netherlands, Sweden and Germany appear to be converging on similar skill profiles for the young (25-28) population in 2010 when ten per cent or less will be in the low skills group. On present trends it will take considerably longer for the UK and Portugal to reduce the low-skilled group to the ten per cent level.

Aims of the study

This study examines the educational attainment of the population in six countries of the European Union with the focus on the low-skilled in the population. In all industrialised countries from the late 1970s onwards the low-skilled were increasingly likely to experience spells of unemployment. (OECD 1994a). In both the US and

European economies the labour market is developing to the detriment of the low-skilled. In the less regulated US economy falling demand was reflected in falling real wages. In the more regulated European economies it is argued that the wages of the low-skilled were kept artificially high at a price which meant that demand fell and unemployment for these groups increased (OECD 1994b). Falling labour-market demand for the low-skilled is a major socio-economic problem and challenge for the countries of the European Union.

This paper forms part of a programme of research entitled 'New job-skill needs and the low-skilled' the ***NEWSKILLS*** project financed under the Targeted Socio-Economic Research (TSER) programme of DGXII of the European Commission. The paper aims

a) to establish the extent of low skills among the population of six European Union countries

b) to chart the progress in each country in reducing the stock of low skills in the population over the period 1985-1996/7

c) to compare proportions with low skills in the same birth cohort across countries at two points during the skill acquisition process

d) chart gender differences in skill acquisition over time in the countries examined here.

Measuring low skills

The most commonly used indicator of low-skills for international comparisons is highest stage of education or education and training completed. While these definitions of skills cannot claim to capture the reality of the whole range of skills that an individual brings to the labour market, they are the only ones available for the purpose of this study and they have some strengths. Information on educational level or qualifications is collected annually or biennially in almost all industrialised countries as part of a wider survey which asks questions about earnings, employment history, training, etc. This means that the relationship of low-skills so-defined to other characteristics of labour markets can be rigorously tested over a prolonged time period.

Stages of education completed or certificates awarded are also important labour market signals in their own right, used by employers and potential employees to convey information about skills and knowledge attained. This makes educational/training level a relevant measure to use in relation to labour market participation. Finally, bringing about change in educational level/qualifications lies within the scope of government policy. Measures to reduce the proportion of individuals at different levels of the education and training system can be clearly formulated and their success monitored.

However, there are still unresolved problems and weaknesses in the survey methods used in the different EU countries to construct the educational level indicator which must be borne in mind when making international comparisons of this sort. These problems and weaknesses were also investigated as part of the ***NEWSKILLS*** project

and are set out in full in a companion paper (Steedman 1998a). These difficulties arise essentially from different criteria used by national surveys when determining an individual's highest level of qualification. In some EU countries only outputs (qualifications) are used to measure educational experience. In others, only inputs (enrolments) are used. In yet others, input measures are used at some levels of the education process and output measures used at other levels.

In this paper, where possible, we have tried to adjust for known quality differences arising from measurement methods when allocating each country's educational level indicators to the UNESCO International Standard Classification of Education (ISCED) scale for purposes of cross-country comparison. Steedman (1998b) tests the robustness of this classification to the ISCED levels against performance on the single measure of skill (literacy) used in the International Adult Literacy Survey (IALS). Set against this literacy measure the ISCED categories look reasonably homogeneous across countries. The EU countries which participated in the IALS survey are Germany, Netherlands, Sweden, Britain, Ireland and Belgium. In those countries we identified the proportion of the 26-35 year old age group that was classed to ISCED 0/1/2. We then found that of this group in these EU countries between one half and two thirds are at IALS (prose) level 1 / 2. For the group of working age (16-65) the differences are somewhat greater. But if we exclude the one outlier - Sweden, - we again find that, on the measure used above, the range of percentage scores is fairly narrow - between two-thirds and three quarters of all at ISCED 0/1/2 are also at IALS ½.

Table 1 below sets out the qualifications allocated to the four ISCED-levels in the six countries compared. The low-skilled group is defined as the group having as its highest qualification completed lower secondary education. This choice of cut-off point for the definition of low skills is based on accumulated evidence on mean relative earnings and mean unemployment rates of groups at this level of qualification across countries. When these are compared, in every country those persons who fail either to complete upper secondary education or to acquire post-compulsory vocational qualifications have distinctly lower earnings and higher unemployment rates than those with upper secondary or higher education (OECD 1994). In this paper we shall refer interchangeably to the low-skilled group, 'individuals at ISCED 2 and below' or individuals without general or vocational upper secondary education.

Table 1 Principal education and initial training qualifications grouped by ISCED level, France, Germany, Netherlands, Portugal, Sweden, UK

Level	France	Germany	Netherlands	Portugal	Sweden	UK
ISCED 5/6/7 Highet Degree Licence BTS/DUT or equivalent		All first and higher degrees All Meister and Techniker	University 3 years or more HBO Higher Professional ed	University (1st degree) Bachelor	Tertiary (post secondary) Shorter And longer than 3 years	All first and higher degrees. All teaching, nursing qualifications. HNC/HND
ISCED	Baccalauréat BT CAP, BEP	Abitur Fachhochschulreife. All apprenticeship passes or equivalent	VWO Pre-university ed HAVO Senior general secondary ed MBO Secondary vocational education	Intermediate courses Upper secondary Secondary (vocational)	Upper secondary education, academic and vocational programme 2-3 years	1 or more A-level passes, GNVQ 3 and equivalent, NVQ 3 and equivalent. Trade apprenticeship GNVQ 2 or equivalent NVQ2 or equivalent
ISCED 2	Brevet (all series)	Leaving certificate of the Realschule or equivalent Leaving certificate of the Hauptschule	MAVO Junior general secondary ed VBO Pre-vocational education	Lower Secondary Preparatory	9-year compulsory school	1 or more O-level/GCSE passes, 1 or more CSE passes. All other qualifications
ISCED 0/1	CEP, No qualifications	No qualifications	Primary Education only	Primary Less than primary	Elementary School Shorter than 9 years	No qualifications

Interpreting data

Stock data allow us to look back and observe trends over time. Changes in stocks of

qualifications in the population over time are the outcome of a number of processes; first, inflows and outflows of individuals from the population, second, improvement in the qualification levels of those who have completed their initial education and training (Green and Steedman 1997).

Flows of qualifications into the population are largely but not exclusively the result of young people completing their initial education and training. Increasingly, the initial qualification process extends long after the age at which schooling is no longer compulsory so that, for example, in a country such as Germany where the age of graduation is exceptionally late, even the 25-28 year old population does not include all initial qualifications acquired by a cohort. In Sweden, participation in adult education is high relative to other EU countries, and is undertaken for recreation as well as to improve qualifications. Thus, while the educational level of most people is usually determined by the time individuals reach their late twenties, for some the level may change at a later age or over the whole life-time. Greater emphasis is now placed on the concept of 'lifelong learning' by national governments and by the European Commission; in future it will be necessary to find ways of monitoring the outcomes of lifetime learning as well as stocks of skills and knowledge accumulated in the course of initial education and training (European Commission 1995).

Demographic factors also influence the change that takes place in the qualification levels of a population over time. If, as has been the case in Germany and in the UK, there has been a sharp decline in the size of the younger cohorts born since 1970 relative to the older ones then numbers of newly qualified individuals at a given level may be similar to numbers exiting from the population. Consequently, high qualification rates of the younger cohorts will not translate into substantial growth in the qualifications of the population as a whole.

Flows into and out of the labour force may also be the result of immigration and emigration of adults. Depending on the country's immigration policy, these flows may or may not add to the stock of skills.

Changes in the qualification of the population are thus not only the result of younger better qualified individuals joining the population of working age, but also the result of individuals gaining further qualifications after entering the labour force. It is beyond the scope of this study to conduct an analysis designed to separate out the two effects. However, we can be fairly confident that in countries where qualification levels have been improving from initially very low levels, a very high proportion of growth in qualification levels will be the result of older less qualified individuals retiring and younger better-qualified individuals taking their place. This is the case in all European countries examined here.

Low skills (ISCED 2 and below) in the population of working age

There is very considerable variation between countries of the European Union in proportions of individuals with qualifications/education which does not go beyond the end of compulsory education.

Table 2 Population of working age (16-64) at < ISCED 3, France (1990) **1996**, Germany (1985) **1995**, Netherlands (1990) **1996**, Portugal 1985, **1997**, Sweden (1985) **1996**, UK (1985) **1996**.

per cent

	France	Germany	N'lands	Portugal	Sweden	UK
< ISCED 3	(51) **43**	(35) **22**	(48) **41**	(87) **77**	(42) **28**	(65) **53**

Source: See Appendix

Table 2 shows that proportions at or below ISCED 2 range from around one quarter of the population of working age in Germany and Sweden to around three quarters of the population in Portugal. In the UK the proportion is just over half and France and the Netherlands have similar proportions - around 40 per cent. In all countries, these proportions have been falling over the period considered here - roughly 1985 - 1996. Lack of consistency in the classification of qualifications before 1990 means that for France and the Netherlands stocks of qualifications for 1996 cannot be compared over time prior to 1990. However, for the other countries the comparator figure - in brackets in Table 2- is for approximately ten years earlier. Table 3a below shows for all the countries for which data is available the average annual decline in the percentage of the population at or below ISCED 2 while Table 3b does the same for all countries from 1990/91.

Table 3a Countries ranked by average annual change in percentage of working-age population at or below ISCED 2 1985- 1995/6/7

Germany	-1.3
Sweden	-1.3
UK	-1.1
Portugal	-0.8

Table 3b Countries ranked by average annual change in percentage of working-age population at or below ISCED 2 1990/91- 1995/6/7

France	-1.4
Sweden	-1.3
Netherlands	-1.3
UK	-1.3
Germany	-1
Portugal	-0.8

Generally, in Europe in the post-war period, barriers to post-compulsory education have been progressively removed. Where a high proportion of the population is low-skilled it might be thought relatively easy to reduce that proportion quickly since many in that group would have natural abilities which would place them in the upper half of the ability range. Table 3a reveals, perhaps rather surprisingly, that over the longer ten-year period the countries which already had the lowest proportions of the population at or below ISCED 2 - Germany and Sweden - made the fastest progress in reducing the proportions at that level. However, over the shorter year period from 1990 onwards it can be seen that the rate of change in Germany slows while in the UK it increases. The UK has made slightly more progress in reducing low skills in the working population since 1990 than during the earlier period while Sweden has maintained the same rate of change over both periods. France and the Netherlands can only be compared since 1990. Both have a rapid rate of decline in low skills. For Portugal, an important indicator is the extent to which the group with primary and less than primary education (ISCED 0/1) has been reduced. Over the twelve-year period Portugal reduced the ISCED 0/1 group (primary and less than primary education) by 10 per cent from 55 per cent in 1985 to 45 per cent in 1997.

Figure 1
Qualification levels of the population aged 16-64 France 1996

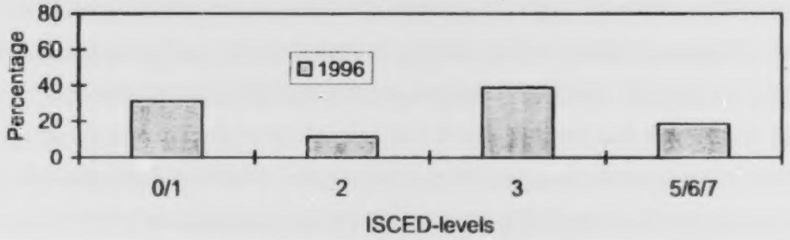


Figure 2
Qualification levels of the populationaged 16-64 Germany 1995

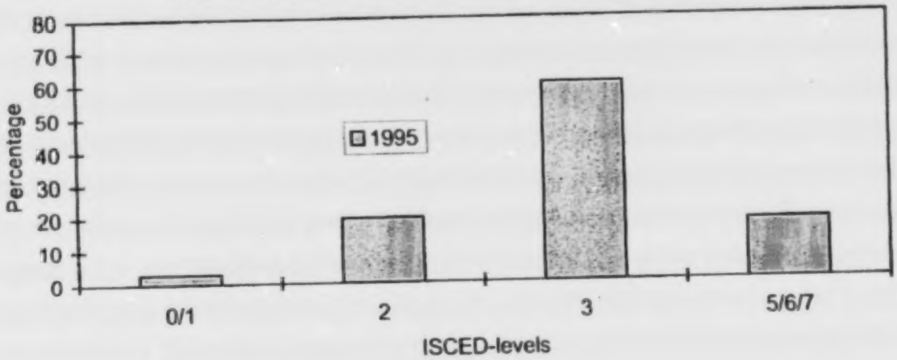


Figure 3
Qualification levels of the population aged 15-64 Netherlands 1996

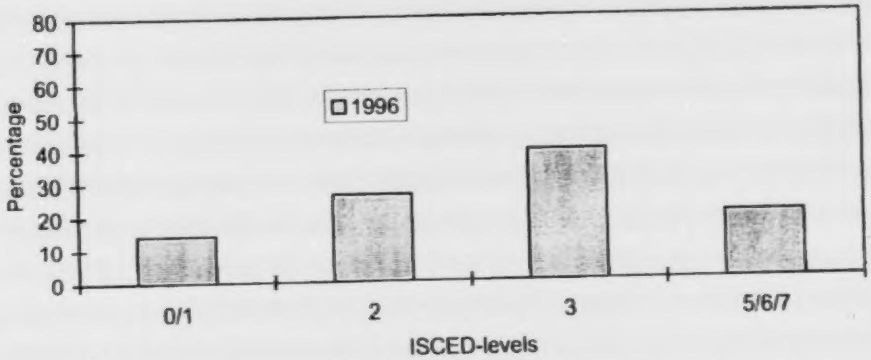


Figure 4
Qualification levels of the population aged 16-64 Portugal 1996

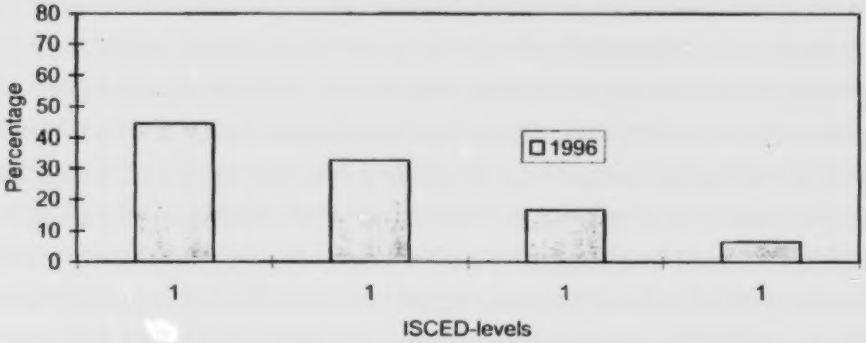


Figure 5
Qualification levels of the population aged 16-64 Sweden 1996

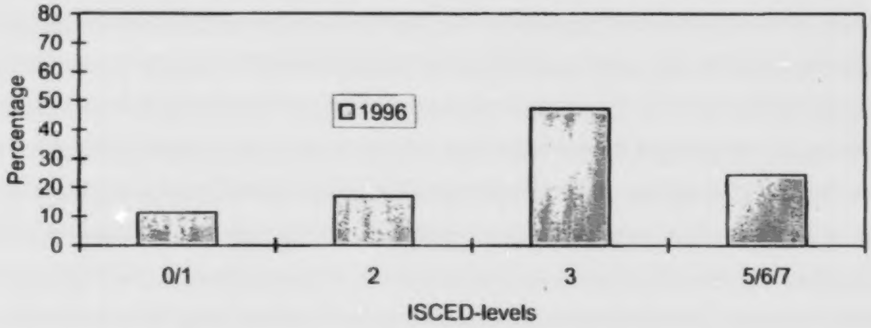
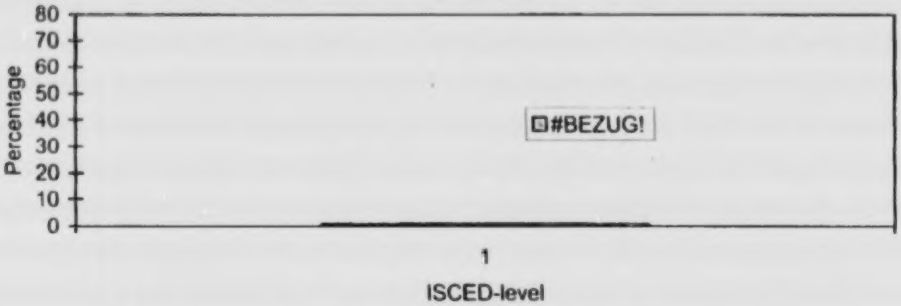


Figure 6
Qualification levels of the population aged 16-64 UK 1996



Figures 1-6

Qualifications at all levels: the population of working age in 1995/1996

Figures 1-6 show the qualification profiles across all four ISCED-levels in France, (1996)

Germany (1995) the Netherlands (1996) Portugal (1996), Sweden (1996) and the UK (1995). Comparing these, we find that Germany and Sweden have similar profiles. In these two countries most people have an upper secondary education or a vocational education after compulsory school (ISCED 3) or a higher education (ISCED 5/6/7). A somewhat greater spread of educational qualifications are found in Sweden than in Germany as a greater proportion of the population in Sweden has less than 9 years of compulsory education and a greater proportion also have higher education (ISCED 5/6/7) than in Germany. A majority of the population of working age also has an upper secondary education or a vocational education or a higher education in France and the Netherlands (63 per cent in France and 59 per cent in the Netherlands). In Portugal and in the UK a majority of the population aged 16-64 lacks an upper secondary or a vocational education.

We have seen from Table 2 that the proportion of the population of working age that can be considered to be low-skilled varies to a great extent between countries. By contrast, the proportion of the population with higher education (ISCED 5/6/7) is very much the same in six countries with the exception of Portugal where higher education is less frequent. Around 20 per cent of the population has a higher education in five of the countries compared while in Portugal the figure is 6 per cent. Thus, with regard to higher education, the qualifications profiles do not differ very much between five of the six compared countries but they differ substantially at the lower end of the educational attainment scale.

Low skills (ISCED 2 and below) in the population aged 25-27/8

Table 4 shows the proportion of the population aged 25-27/28 at < ISCED 3 for the six EU countries. For all countries the young age group is better qualified than the older age group. However, the UK shows only a small improvement. The relative positions on the low-skills ranking seen in Table 2 are broadly similar in Table 4. Only one country, France, has succeeded in improving its rank position when the younger age group is considered relative to the whole population.

Table 4. The proportion of the population of age 25-27/28 at < ISCED 3. France (1990) **1996**, Germany (1985) **1995**, Netherlands (1990) **1996**, Portugal (1985) **1997**, Sweden (1985) **1996**, UK (1985) **1996** Per cent

	France	Germany	N'lands	Portugal	Sweden	UK
< ISCED 3	(32) **24**	(18) **13**	(34) **26**	(78) **61**	(22) **13**	(56) **46**

Source: See Appendix

Table 4 shows that great variation in proportions at the lowest skill levels are also found among young people. Germany and Sweden have only small proportions (13 per cent) at ISCED 0/1/2. France and the Netherlands have about one in four of 25-28 year olds lacking further education but in the UK almost half and in Portugal almost two thirds of 25-27 year olds lack further education. From this we can conclude that failure to progress to post-compulsory education is not just the result of formal barriers to mass participation within education systems. This was undoubtedly the case for the older populations in all countries. But younger age groups have not encountered these formal barriers to progression beyond compulsory education and we must look elsewhere - to informal barriers within education and to factors outside education for explanations of low participation rates.

Figure 7
Qualification levels of the population aged 25-28 France 1996

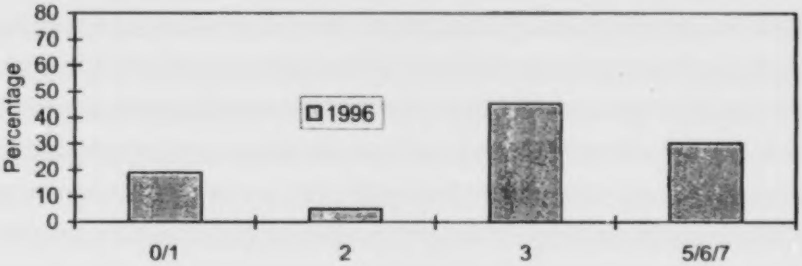


Figure 8
Qualification levels of the population aged 25-28 Germany 1995

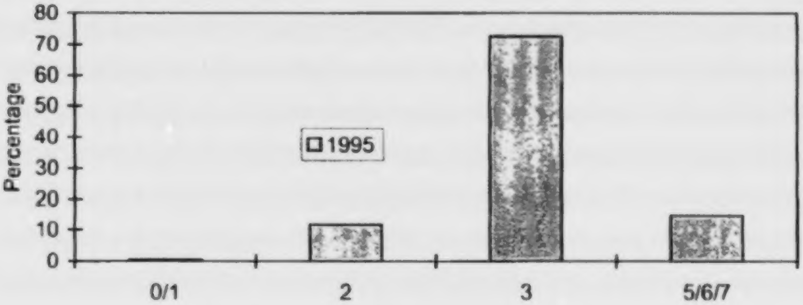


Figure 9
Qualification levels of the population aged 25-28 Netherlands 1996

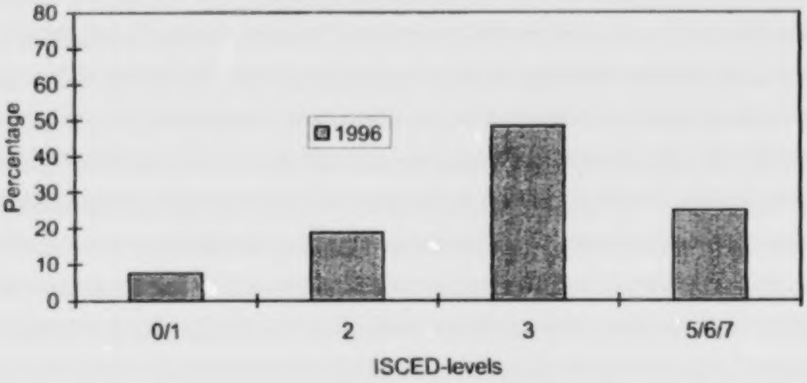


Figure 10
Qualification levels of the population aged 25-27 Portugal 1996

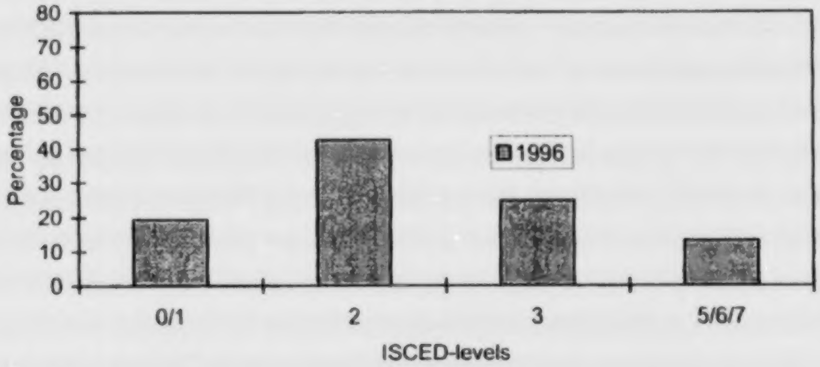


Figure 11
Qualification levels of the population aged 25-27 Sweden 1996

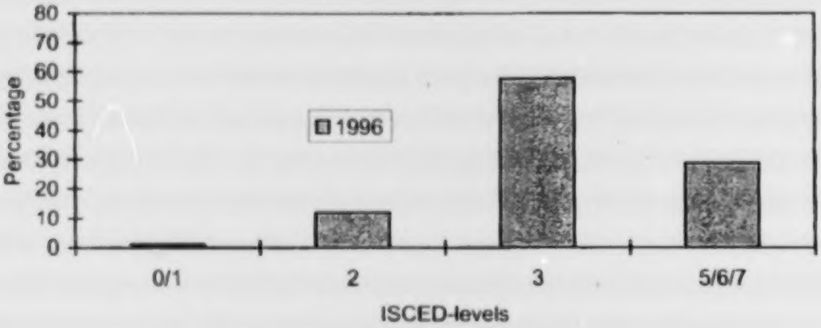
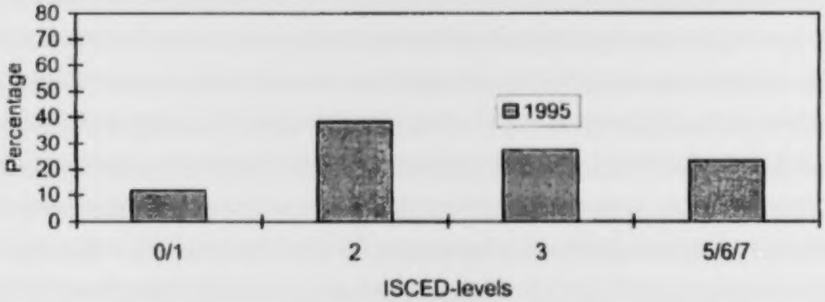


Figure 12
Qualification levels of the population aged 25-27 UK 1995



Figures 7-12

Qualifications at all levels: the population of 25-27 and 25-28 year olds in 1995/1996

Figures 7-12 show the qualification profiles across all four ISCED-levels in France, (1996)

Germany (1995) the Netherlands (1996) Portugal (1996), Sweden (1996) and the UK (1995). Even for this young age group, the distribution of qualifications by ISCED-level between the six countries varies and in broad outline reproduces the profiles for the population of working age 16-64.

Looking at all qualification levels, Germany and Sweden have similar qualification profiles (Figures 8,11). Young people with less than nine years of elementary education (ISCED 0/1) are almost non-existent and young people with only a 9-year compulsory education (ISCED 2) are also rare in both countries (less than 15 per cent). A majority of young people (73 per cent in Germany and 58 per cent in Sweden) have a qualification level of ISCED 3 (upper secondary or vocational education) in these countries. In Germany a majority of young people with ISCED 3 have a vocational education through apprenticeship and in Sweden a two-year vocational upper secondary education is most common in this group (OECD1995; Murray 1997).

The Netherlands also has a qualification profile very much like Sweden. Almost every second young person of age 25-28 in the Netherlands has an upper secondary or a vocational education (48 per cent) and only a small proportion are without qualifications (ISCED 0/1). Also in France almost every second young person aged 25-28 (48 per cent) has an upper secondary or a vocational education. However, young people without qualifications (ISCED 0/1) are more common (19 per cent) than in Germany, Sweden, the Netherlands and the UK. In the UK in 1985 only 27 per cent of 25-27 year olds have ISCED 3 which is almost as small proportion as in Portugal (25 per cent).

The proportions of young people aged 25-27/8 with a higher education vary less between the six countries than the proportions of young people at the lower end of the ISCED scale, just as was found in the total population of working age. In France and Sweden 29 per cent of young people have a higher education and in the Netherlands and the UK 25 and 23 per cent have a higher education. In Germany and in Portugal higher education is not as common as in the other countries. In Germany 15 per cent and in Portugal 13 per cent have a higher education.

Considering the large proportion of 25-28 year olds that have ISCED 3 in Germany it is rather surprising that only 15 per cent of 25-28 year olds have a higher education. One explanation is of course that most young people with ISCED 3 have a vocational education which prepares them for the labour market and not for higher education.

Another is that it takes a long time to get a higher education in Germany. Not all students have finished their university examination at the age of 25-28. In fact, if we analyse the population aged 29-38 we find that a much more respectable proportion - 21 per cent - has a qualification above ISCED 3. Because higher education evidently requires such a long period of study, it is a considerable economic investment for young people in Germany to go to the university. This may prevent some young men and women from continuing to university after upper secondary school in Germany and helps account for the somewhat lower proportions in Germany with higher education.

Recent changes in the composition of the stock of skills: a comparison of 25-27 year olds in the mid 1980s and mid 1990s

Most of the improvement in skill levels in the population as a whole results from improvements in the education of young people reaching working age. Raising skills in the younger population is therefore an important task for the countries under investigation . By comparing the skills profile of 25-27 [or 25-28] year olds in the 1980s with those of the same age ten years later in the 1990s, we can see more clearly the contribution that each country's initial education and training system has made to raising skill levels and reducing the proportion of those with low skills over a ten year period. It must be recalled, however, that with respect to education policy, the periods being compared in each country are the years in the 1960s and 1970s when these younger groups were of school age. Figures 13-18 show the qualification profile of the 25-28 year old population in Germany and the 25-27 year old population in Portugal, Sweden and the UK in the 1980s and ten years later in 1990s. For Germany and the UK data is for 1985-1995; for Sweden and Portugal data is for 1986-1996. The profiles of France and the Netherlands are from 1990 and six years later 1996.

Figure 13
Qualifications levels of the population aged 25-28 France 1990, 1996

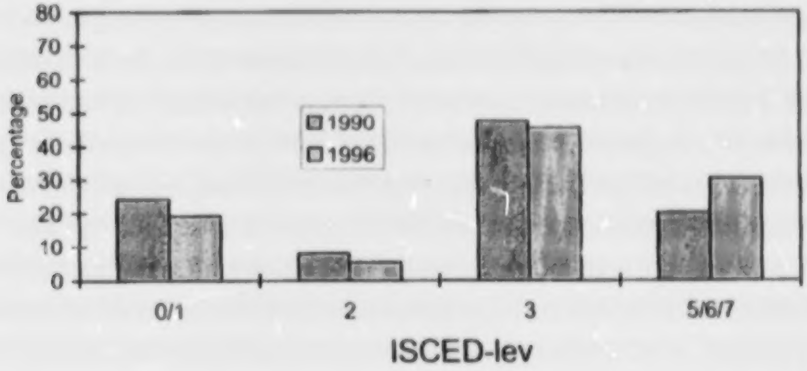


Figure 14
Qualification levels of the population aged 25-28 Germany 1985, 1995

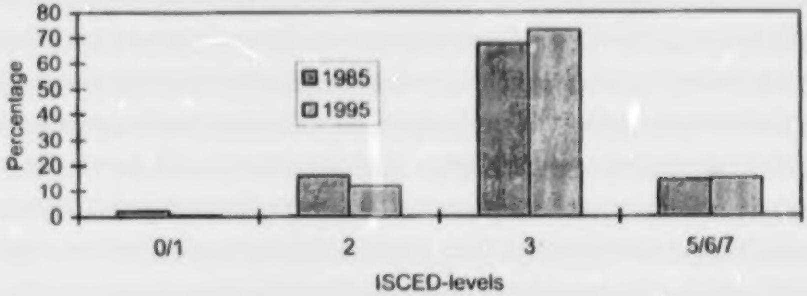


Figure 15
Qualification levels of the population aged 25-28 the Netherlands 1990, 1996

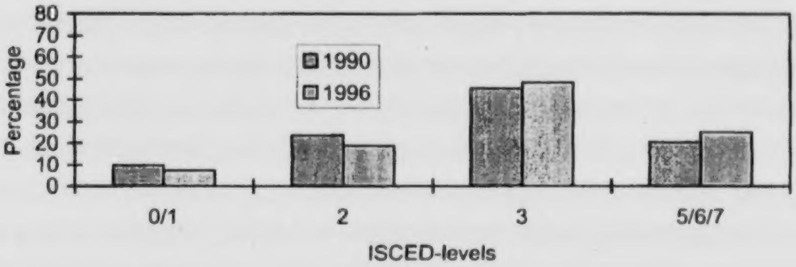


Figure 16
Qualification levels of the population aged 25-27 Portugal 1986, 1996

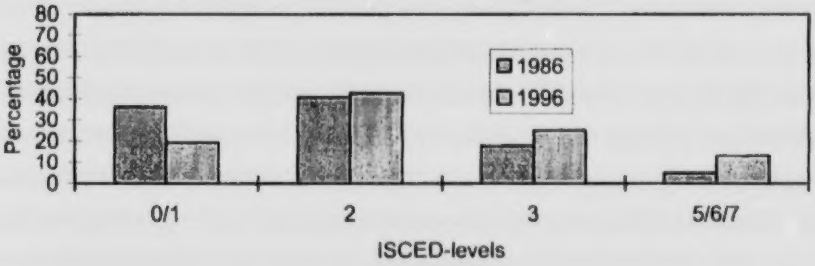


Figure 17
Qualification levels of the population aged 25-27 Sweden 1986, 1996

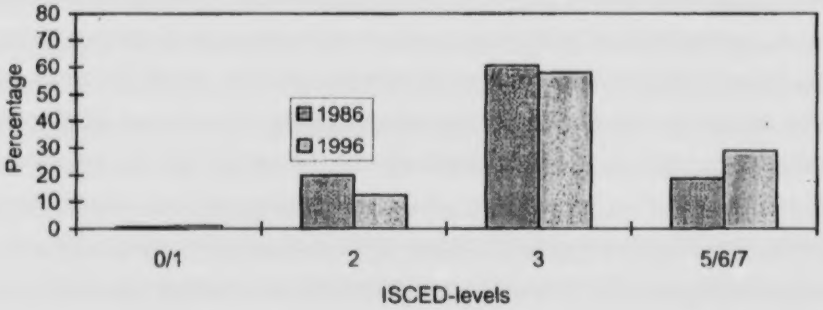
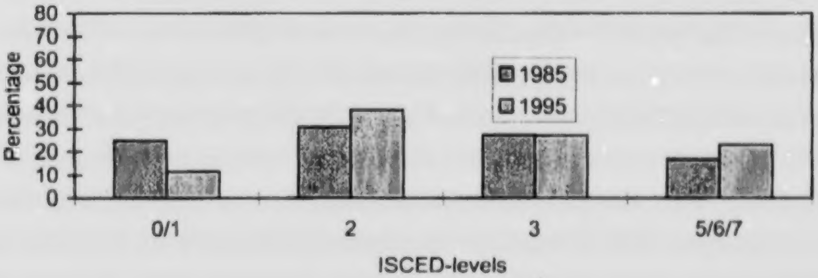


Figure 18
Qualification levels of the population aged 25-27 UK 1985, 1995



Figures 13-18

Figures 13-18 show that young people who were educated in the 1980s were better qualified in all the countries compared than those educated ten years earlier. The greatest change has taken place in Portugal where young people at ISCED 0/1 have fallen by 17 per cent. There has been a corresponding increase in the proportion of young people with education beyond compulsory school (ISCED 3 and 5/6/7). The UK has the second largest change over the ten years with a reduction of young people with ISCED 0/1 of 13 per cent which has resulted in an increase in young people with ISCED 2 and 5/6/7. The reduction of young people with no qualification in Portugal has been in part the result of a longer period of compulsory education which now incorporates a lower secondary education (ISCED 2). However, in the UK the increase at ISCED 2 is the result of more pupils being entered for and gaining academic and other qualifications at age 16. As a result the 0/1 category - those with no qualifications- has been considerably reduced.

Changes in the qualifications of young people have been smaller in the other European countries where low levels of education were less common in the 1980s. The increase in qualifications among the young population in France, the Netherlands and Sweden has mainly resulted in a greater proportion of young people with higher education (ISCED 5/6/7). An increase in young people with an upper secondary or a vocational education can only be found in Germany and Portugal and to a very small extent in the Netherlands.

To summarise, a reduction of low-skilled young people has taken place in all six European countries which have been compared during the investigated 10 and 6 year periods. The greatest changes have been among young people with no qualifications (ISCED 0/1). This group has been reduced considerably in Portugal, and the UK, countries in which this group was large in the 1980s. The proportion of young people with higher education has also increased in all countries except in Germany where it has been almost unchanged. Instead the proportion of young people with an upper secondary or a vocational education has grown in Germany.

Improvements in qualification levels: progress of the 1986-89 19-21 year old cohort seven years on

Until now we have examined qualification levels at different points in time. We have seen changes in corresponding age-groups over time and noted how qualification profiles differ between countries. However, we have not observed the dynamics of this process in any detail. We have not studied the flows of students in the educational system. The best way to study the flows is to use longitudinal data, as the same individuals are followed over a certain time. However, stock data does allow us to look at two randomly drawn samples from almost the same population at different points in time. We are able to do this for the six investigated countries here.

The qualification levels of young people age 19-21 in 1989 or 1990 and six years later when this group of the population have reached the age of 25-28 were investigated. The results are shown in Figures 19-24.

Figure 19
Qualifications of 19-21 year olds 1990 and 25-28 year olds 1996 France

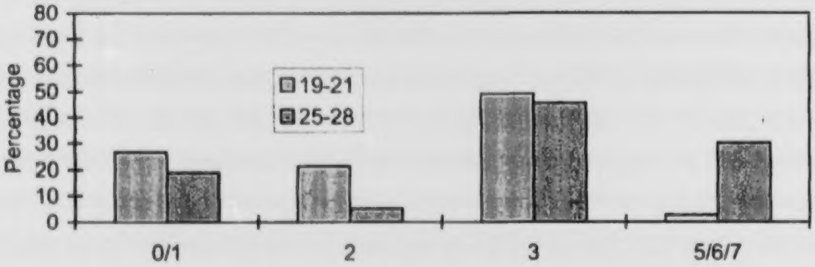


Figure 20
Qualifications of 19-21 year olds 1989 and 25-28 year olds 1995 Germany

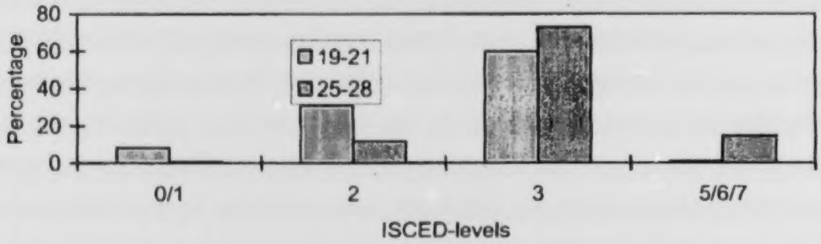


Figure 21
Qualifications of 19-21 year olds 1990 and 25-28 year old 1996
Netherlands

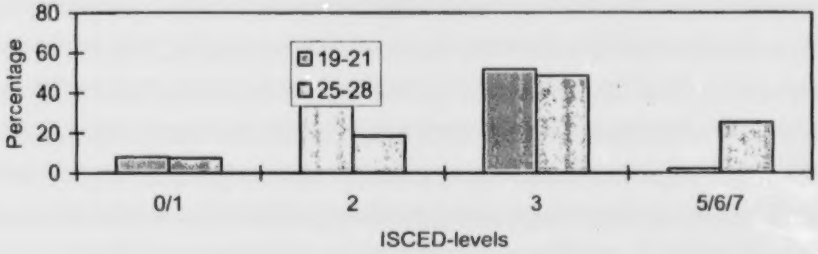


Figure 22
Qualifications of 19-21 year olds 1990 and 25-27 year olds 1996 Portugal

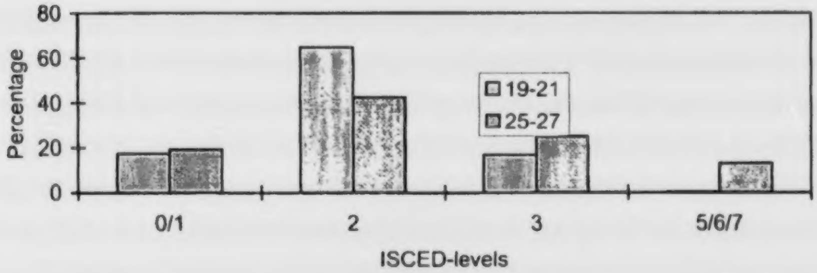


Figure 23
Qualifications of 19-21 year olds 1990 and 25-27 year olds 1996 Sweden

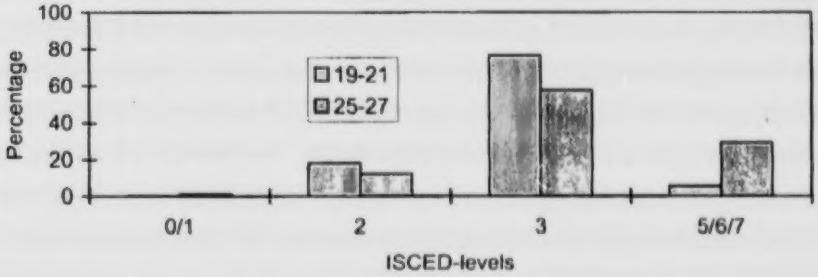
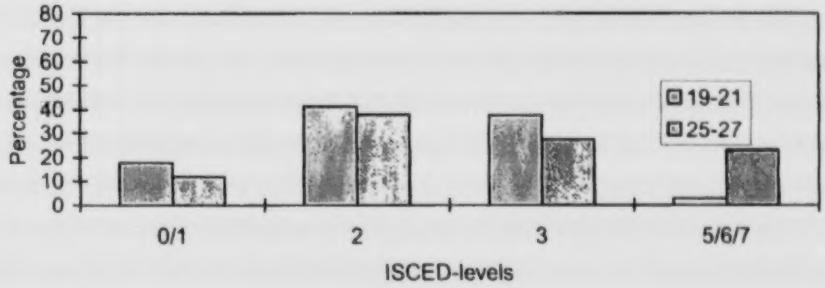


Figure 24
Qualifications of 19-21 year olds 1989 and 25-27 year olds 1995 UK



Figures 19-24

Sweden

Only a further six per cent of the Swedish 19-21 year olds with only compulsory education (ISCED 2) had obtained an upper secondary qualification after age 21.This indicates that it is rather unusual in Sweden to obtain these qualifications after leaving the full-time initial schooling system. Proportions at ISCED 2 and below declined by 27 per cent. But it must be recalled that the proportion of 19-21 year olds in Sweden with low level (ISCED 0/1/2) qualifications is already very low. As in other countries proportions of the age group obtaining higher education have increased in recent years; an increase in the proportion of young people with a higher education should give a corresponding reduction of the proportion of young people with an upper secondary education (ISCED 3) if the flows from lower levels are small. This is the case for Sweden.

The UK

In the UK the proportion of young people without qualifications (ISCED 0/1) or with ISCED 2 has decreased during the six year period but the decrease is small both absolutely and relative to the other countries considered. Only 9 per cent of those at ISCED 2 or below at age 19-21 have obtained an ISCED 3 qualification by the age of 25-28. Because of this small flow from the lower levels into the ISCED 3 category and the considerable increase in the proportion of young people with a higher education over the six year period there is a net decline in numbers at the upper secondary education (ISCED 3) level.

France and the Netherlands

In France and the Netherlands significant proportions of young people with only compulsory education or less (ISCED 0/1 or 2) have got an upper secondary education (ISCED 3 or more). The ISCED 0/1 or 2 group declined by 51 per cent in France and by 43 per cent in the Netherlands. In France 24 per cent and in the Netherlands 20 per cent of those who were at ISCED 0/1 or 2 age 19-21 had obtained an upper secondary education six years later. As in all other countries, in France and the Netherlands significant proportions qualified at the tertiary level by age 28. However, flows out of the ISCED 3 category to higher education were nearly compensated for by inflows from the lower levels.

Portugal and Germany

In Portugal considerable progress was made after age 21 in reducing numbers with only compulsory education. Proportions at ISCED 2 decreased by 25 per cent while the proportion at ISCED 0/1 increased very slightly (possibly the result of an inflow of older immigrants to school system as in Sweden). In Germany also there was a large fall in numbers at ISCED 2 (68 per cent decrease) while the ISCED 0/1 category virtually disappeared. In both Germany and Portugal proportions of young people with an upper secondary education (ISCED 3) increased between ages 21 and 28 - by 27 per cent in Germany and 20 per cent in Portugal.

In short, around one quarter of low skilled young people of age 19-21 (ISCED 0/1 and 2) gained an upper secondary qualification in France, Germany, the Netherlands and Portugal by age 25-27/8 (20-27 per cent). A smaller proportion of the low-skilled gained a further education in the UK and Sweden (9 per cent in the UK and 5 per cent in Sweden). In the UK many young people leave school after compulsory education - or enter post-compulsory education and fail to qualify. This explains the low proportion that attained a further education during the investigated six year period. In Sweden the proportion of 19-21 year olds with an upper secondary or a vocational education (ISCED 3) was already quite large and the proportion with low education (ISCED 0/1 or 2) was already quite small in 1990. One explanation for this is that grade-repeating is more or less common in the investigated countries, but not in Sweden. Thus, most young people go through their school years without delay. Another explanation is that there are no formal examinations either after compulsory or upper secondary school in Sweden. There are only national tests to standardise the teacher marks. When pupils have finished compulsory or upper secondary school they are classified to ISCED 2 (compulsory school) and ISCED 3 (upper secondary school) respectively without much delay. In other European countries grade repeating and examinations prolong the number of school years until young people have got their educational credentials.

Another reason for the variation in the proportion of young people who have gained an upper secondary education during the six year period is how attractive an upper secondary or a vocational education is *per se*. Is further education only a means to a higher education or does it have a value of its own? In the UK but also in Portugal the proportion of young people with an upper secondary or a vocational education (ISCED 3) is not much larger than the proportion of young people with a higher education in contrast to the other four countries where the proportion of young people is considerably greater than the proportion with higher education. In Germany this difference is most apparent. This indicates that proportions proceeding to ISCED 3 and not continuing to higher education depend upon the extent to which ISCED 3 qualifications are valued on the labour market in their own right.

Figure 25
Men and women aged 16-64 with ISCED 0/1 France 1990-1996

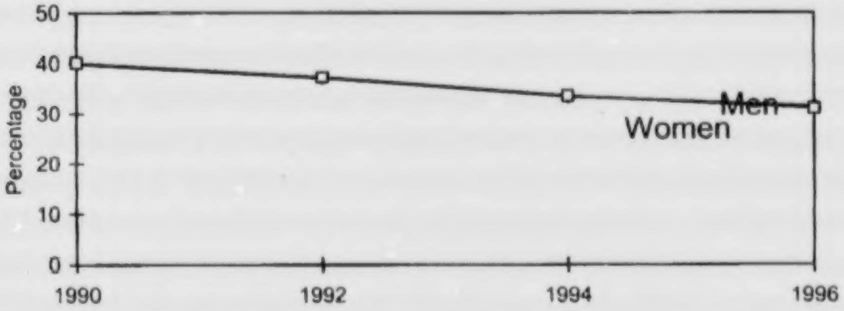


Figure 26
Men and women aged 16-64 with ISCED 0/1 and 2 Germany 1985-1995

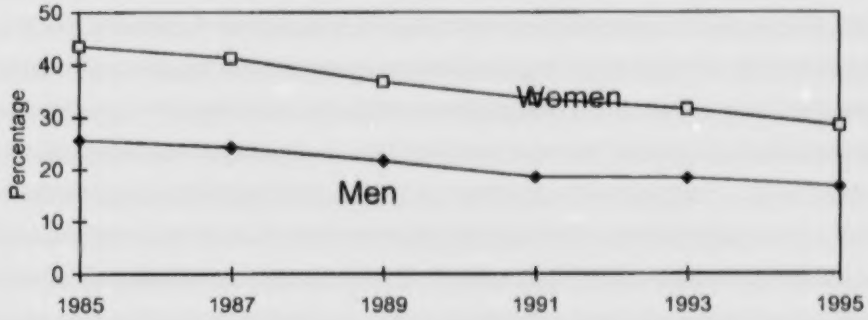


Figure 27
Men and women aged 15-64 with ISCED 0/1 Netherlands 1990-1996

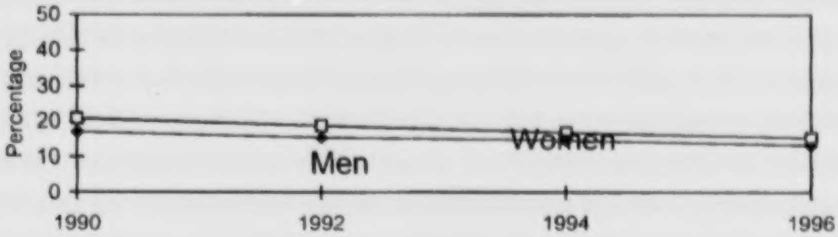


Figure 28
Men and women aged 16-64 with ISCED 0/1 Portugal 1986-1996

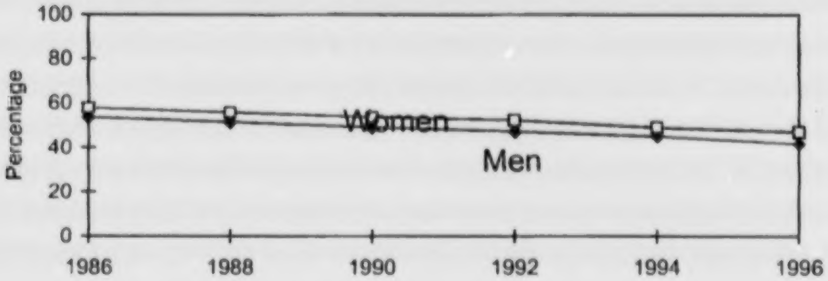


Figure 29
Men and women aged 16-64 with ISCED 0/1 and 2 Sweden 1986-1996

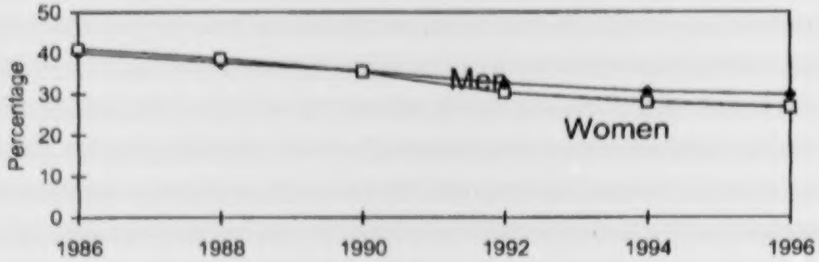
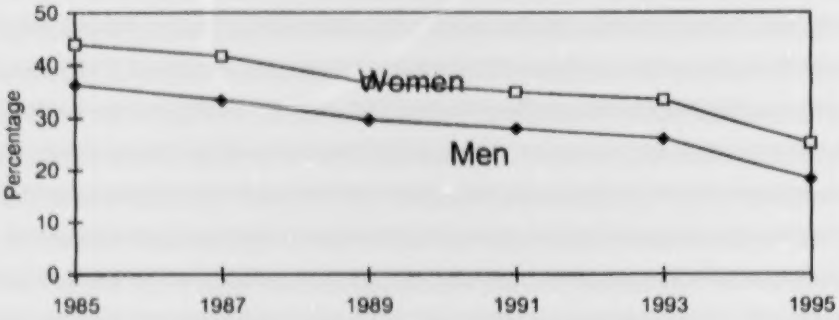


Figure 30
Men and women aged 16-64 with ISCED 0/1 UK 1985-1995



Figures 25-30

Qualifications of men and women

Until now we have only studied the qualifications of the total population and of certain age groups. We have, however, not examined men and women separately. One question is the extent to which men and women have the same level of qualifications. Another question is how the qualification profile has developed for men and women in the compared European countries. The development of the low-skilled group in the population of working age by gender is shown for some recent years in Figures 25-30 for the six compared European countries. In most countries proportions of low skilled are very much the same for men and women. But in Germany there was a skills gap in favour of men of the order of 20 percentage points in 1985 narrowing to around ten percentage points in 1995. In the UK the gap in favour of men was around 10 percentage points in 1985 and had not narrowed significantly by 1995. In France there were equal proportions of low-skilled men and women. In Portugal and Sweden there were slightly lower proportions of low-skilled women than men.

Figure 31
Men aged 16-64 and women aged 16-59 with higher education (ISCED 5/6/7) France 1986-1996

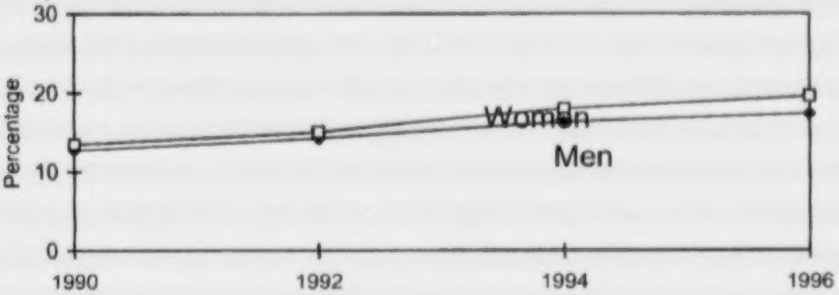


Figure 32
Men and women aged 16-64 with higher education (ISCED 5/6/7) Germany 1985-1995

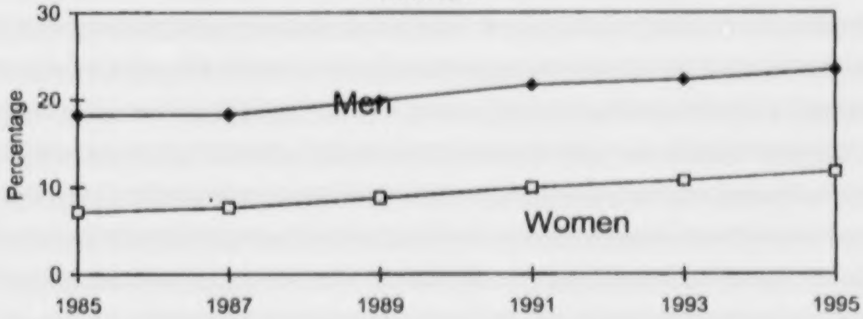


Figure 33
Men and women aged 15-64 with higher education (ISCED 5/6/7)
Netherlands 1990-1996

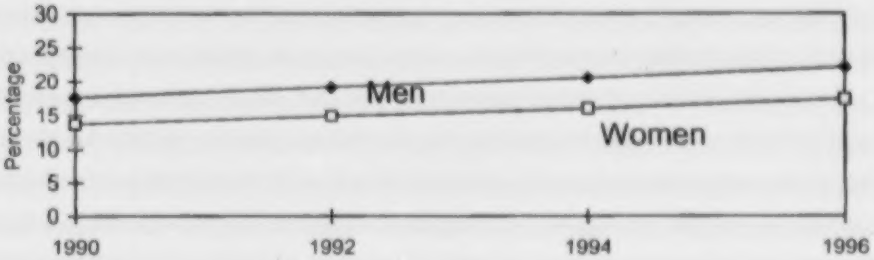


Figure 34
Men and women aged 16-64 with upper secondary and higher education
(ISCED 3/5/6/7) Portugal 1986-1996

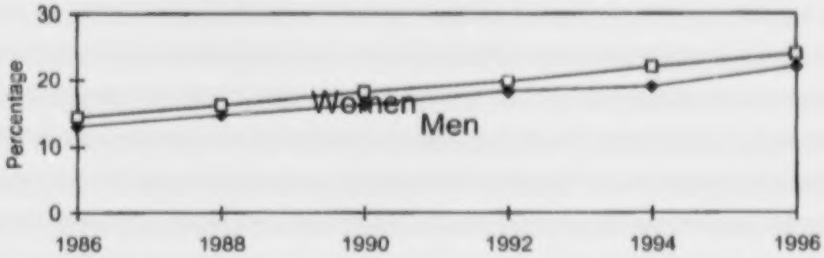


Figure 35
Men and women aged 16-64 with higer education (ISCED 5/6/7)
Sweden
1986-1996

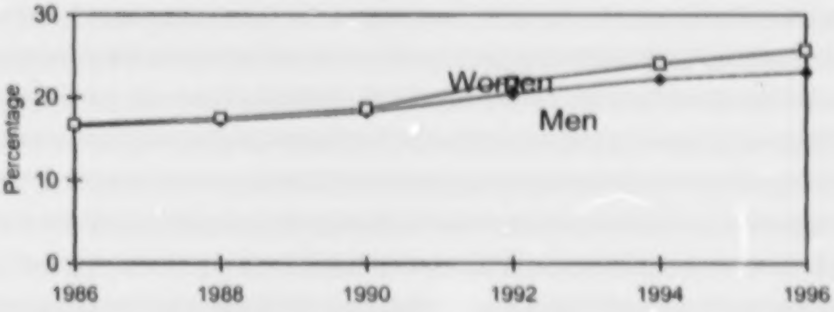
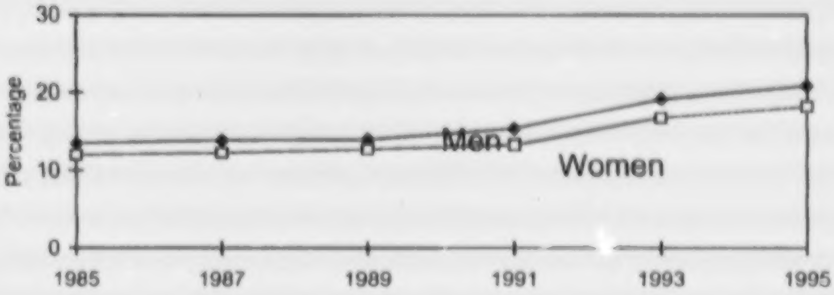


Figure 36
Men and women aged 16-64 with higher education (ISCED 5/6/7) UK
1985-1995



Figures 31-36

In Figures 31-36 the top end of the ISCED-scale (ISCED 5/6/7) is studied for men and women. The differences in the proportion of highly-qualified men and women were small in all countries except Germany and the Netherlands where the male advantage is 10 and 5 per cent respectively. Men also had a slight advantage over women in the UK. In France a somewhat larger proportion of women than men has a higher education. This difference has also been widening slightly. In Sweden a widening gap between men and women is also found; a greater proportion of women than men having a higher education. In Portugal the development has been parallel for men and women during the investigated period.

Comparing men and women at both ends of the ISCED-scale there are only slight differences in their respective levels of educational attainment in France, Portugal and Sweden. A common trend for these three countries is that women of working age are increasingly likely to be better educated than men. In Germany, the Netherlands and the UK the reverse is the case and men are more educated than women. The gap between men and women is largest in Germany at both ends of the ISCED-scale. How can this be explained? One explanation is perhaps that the apprenticeship system which has a long tradition in Germany attracts more men than women or it offers more opportunities for men than women. Skilled workers are usually men. For instance in a Swedish study of young women with a traditional male vocational education it was found that these women did not end up as skilled workers as often as young men with the same education did but more often as an unskilled worker or a non manual worker (Häller, 1992). Another explanation is that higher education takes a longer time in Germany than in many other countries in Europe. Women may by tradition hesitate more than men to invest in a long and expensive higher education.

Summary and conclusions

Qualifications profiles vary between the six compared European countries and differences are greater at the lower end of the ISCED-scale than at the top end of the scale. A common trend for the six countries is that the average educational attainment level of the population of working age has improved. In all countries the low-skilled group (ISCED 2 and below) has declined over recent years but faster in some countries than in others.

Comparing the qualifications profile of young people (25-27/28 year olds) over a recent period, we can get a picture of the most recent changes in the qualifications of young people in selected EU countries. The greatest change has taken place in Portugal where the proportion of 25-27 year olds with ISCED 0/1 was reduced by 17 per cent from 1986 to 1996. A great change has also taken place in the UK where the proportion of 25-27 year olds with ISCED 0/1 decreased by 13 per cent. The proportion of young people with higher education has also increased in all countries.

The age at which individuals move from the lowest skill levels was studied by comparing the skill profile of samples taken from a single age cohort (25-27/28 year olds compared with 19-21 year olds six years earlier). This comparison showed that in France, Germany and the Netherlands a considerable proportion of young people with low skills (ISCED 0/1 and 2) at age 19-21 had obtained higher level qualifications by age 25-27/8. In the UK and Sweden, by contrast, only small proportions of 19-21 year olds improved their qualification levels by age 25-28. In Sweden only a small proportion of the 19-21 year olds were at ISCED 0/1/2 compared to the other five countries, as most young people have already finished their upper secondary or vocational education by age 21. But this was not the case for the UK where half the age group remained at the lowest skill levels at age 25-27/8.

Comparing the skill profiles of men with those of women of working age we found that in the UK, the Netherlands and Germany men were better qualified than women, but in France, Portugal and Sweden the reverse was the case. Differences in the proportion of low-skilled men compared with women were small in all countries except Germany and the UK. Differences in the proportions of men with a higher education compared to women were small in all countries but here again, Germany was the exception - there was a ten per cent gap in Germany in favour of men and this gap remained constant over the ten year period.

Prospective

If the tendencies of the last ten years continue, the skill profiles of the population of working age will become more alike in the six European countries we have studied. In all countries the low skills group is declining. It seems likely that those countries where this group is already small (Germany, Sweden) will in future reduce low skills at a slower rate than countries where there are high proportions of low skills (UK and Portugal). We therefore appear to be witnessing a limited process of convergence. We consider it unlikely that these two countries will move to a skill profile like that of Germany with a majority of the population having an upper secondary or a vocational education, as the proportion of young people with this qualification level has hardly increased at all during the last ten years in the UK and in Portugal it has increased less than the proportion of young people with higher education.

Looking ahead to the year 2010 and basing our predictions on recent growth rates for the young (25-27/28) age groups, France, the Netherlands and Sweden and Germany seem to be moving towards similar skill profiles. There will be few or no young people without upper secondary education and a growing number of young people will obtain higher education qualifications. Despite Portugal's recent rapid growth in skill levels of the young age group the low skill group will still account for around two-fifths of all 25-28 year olds in the year 2010 on present trends. UK progress in reducing the low skill group has been less spectacular than that of Portugal and the UK can expect to have around one fifth of the young age group at the ISCED 0/1/2 level by the year 2010 on present trends. We can thus expect to see substantial differences persisting over the medium term unless greater efforts are made to target the low skill group in Portugal and in the UK.

Appendix

Data used to prepare this study were taken from the following sources: France *Enquête-Emploi* Special Tabulations prepared by the *Centre d'Etudes et de Recherche sur les Qualifications* (CEREQ). Germany *Mikrozensus* Special Tabulations prepared by the *Statistisches Bundesamt*, Wiesbaden. Netherlands *Enquête beroepsvolking* Special Tabulations prepared by the *Max Goote Kenniscentrum*, Amsterdam. Portugal, Labour Force Survey Special Tabulations prepared by CEPCEP, Catholic University of Portugal. Sweden, Statistics Sweden *Utbildning och befolkning* Special Tabulations prepared by Stockholm Institute of Education. UK Labour Force Survey Special Tabulations prepared by Centre for Economic Performance, London School of Economics and Political Science. It should be noted that for the sake of consistency in the construction of time series data, Germany refers to the territory of the former Federal Republic of Germany. The following warning relating to the German data after 1989 needs to be kept in mind. After that time the German figures substantially overstate the numbers with no qualifications (ISCED level 0/1). This results from a change in the regulations governing the administration of the German Mikrozensus. After 1989 respondents were no longer bound by law to respond to all questions asked and a proportion- around 10 per cent - subsequently declined to do so. These non-responses were coded to the 'no qualifications' category when in fact many of those not responding held a qualification. Using the 1989 data, and comparing with subsequent years, we estimate that the proportion at the ISCED-level 0/1 should be some 10 per cent lower than the figure recorded in the Mikrozensus. All charts for Germany post 1989 in text of this report allow for this adjustment.) The data series prepared for this study are being progressively published on the Internet at http://cep.lse.ac.uk under the heading Datasets as part of the work for the ***NEWSKILLS*** project funded by the European Commission.

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4 'Transitional labour markets' between the vocational-training system and the employment system

Klaus Schömann[114]

Introduction

Comparative research into the relationship between the labour market and the education and training system essentially demonstrates that there is no single ideal way of harmonising the two. Each of the national education, vocational-training and employment systems has its fundamental strengths and weaknesses. This paper compares the German and Italian approaches and examines the ways in which this relationship between the education and training system and the labour market changes when unemployment becomes a more enduring problem. There are surely lessons to be drawn from the Italian experience for both the older and the newer *Länder* of the Federal Republic of Germany. Comparative research into the labour market and the education system of neighbouring countries, as well as analysis of experiences and reform efforts in those countries, can help us to draw conclusions for our own approach.

Let me begin by commenting briefly on the vocational-training system in the Federal Republic, which is rooted in a very long tradition. There are moves in Germany to revive certain elements of the vocational-training system that have long been forgotten, elements whose origins go back to the Middle Ages. The journeyman was already a familiar figure in mediaeval times. Within the European Union, a modern-day version of the travelling journeyman as part of the vocational-training process is a fascinating idea. Journeymen in the German system of vocational training were young men who, immediately after completing their apprenticeship, spent a certain amount of time travelling through the German states, quite simply to perfect and apply their craft in different regions. This was normally done, of course, within the same linguistic area, but the idea of the travelling journeyman was certainly quite widespread at that time. There are attempts today, within the scope of the relevant EU action programmes, such as the Leonardo da Vinci vocational-training programme and the Adapt employment initiative, to borrow from this tradition of extended vocational experience.

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The first part of this paper presents sociological theories that help to define the significance of vocational training as a determinant of status in the labour market. The paper then goes on to explain the special importance of vocational education and training when it comes to subsequent career moves — not only the first move but also the wide range of situations in which people return to the job market. On the basis of current controversies in the domain of training policy in Germany, the paper concludes by identifying necessary reforms to the training system.

1. *Theoretical observations*

The training situation in Germany, compared with those of its European neighbours, may be described as stagnating at a fairly high level. Politicians and the two sides of industry are anxious to avoid any deterioration, such as a reduction in the number of training places. With the global environment and the European internal economy changing so rapidly, however, to stand still is to fall behind. In labour-market theory, the influence of which has also affected the education system, the philosophy of human capital is heavily stressed. According to that philosophy, investment in the human resources of an entire population is an important factor of economic growth. Back in the sixties and seventies, for instance, it was already recognised that investments in this factor yielded a very high rate of return for the whole of society, while also ensuring that the individual's investment in his or her own education and training paid handsome dividends.

More light should be shed on this problem of the difference between the micro- and the macroeconomic level. In Italy we find very high investment in education and training at the macroeconomic level, because they are important to the whole of society as well as being a major factor in economic growth. How much of this investment reaches the shop floor or really affects the course of any individual's life, however, is another matter. A wide variety of leakage can occur — not only in Italy — through the inefficient or unequal use of funds. This naturally leads to tensions that every society has to withstand and try to resolve. The way in which personal efforts and company policies in the domain of education and vocational training are brought together is of vital importance in determining the training level of the entire population.

Our theoretical perception of the labour market is one of the keys to our understanding of its structure and regulation. The so-called segmentation theory is often applied to the labour market: segmentation researchers study the ways in which young people without any training, with initial vocational training or with a university education enter the labour market. The proposition that there are very specific entry channels in the German training system and labour market has been substantiated by empirical analyses (Blossfeld, 1987; Schömann, 1996). It is apparent that variations in career patterns — or status sequences, as sociologists might call them — generally reflect differences in the way in which initial training has been acquired.

When we speak of initial training, we usually mean the training that the individual has completed by about the age of 20. A different situation naturally obtains in the case of a young person who has gone on to higher education. University and college students have the opportunity to review what might have been a premature career decision or to broaden considerably their range of vocational options. This opportunity can be sought either by moving into the university or college system or by undergoing specific courses of further education. The latter should be a means of escaping somewhat from the fairly narrow career framework prescribed for those whose initial training was imparted through the "dual system" of part-time education combined with on-the-job training.

The deep imprint left by the initial system of vocational training on career patterns is also seen in the regulatory framework of labour legislation or collective agreements within which employment contracts are formulated. This means that today's company pay structures, increment scales and income categories, as well as the ways in which employees' incomes develop in the course of their service, are still determined to a great extent by whether or not the employees in question have acquired the relevant vocational qualifications.

In other words, this early differentiation, based on the nature and quality of an individual's vocational training, also channels individuals into particular long-term career paths within the labour market. This means that the early operational or even personal experience of employment which vocational training imparts forms an important first threshold in the transition from the education system to the world of employment.

2. *The theory of transitional markets*

This analysis of the entire system of labour markets and employment was further developed by Günther Schmid at the Berlin WZB's Department of Social Research in 1993; this development put employment more firmly at the heart of the analysis. His theory, in a starkly simplified diagrammatic form, is presented in the annex to the present paper. At the heart of the analysis is the first job market, the various types of transition and the first transitional market, which may, for example, represent a move from paid employment to self-employment or between full-time and part-time work.

This paper focuses primarily on the transitional market between education and employment. In the Federal Republic of Germany, the place of the vocational-training system within the education system is even enshrined in law. The theory of transitional labour markets, however, attempts to look through this strict distinction and to examine very carefully the ways in which the employment system, career patterns and the way a society is characterised or structured by the labour market are actually interconnected.

The aim is to build simpler and more suitable bridges between the education system and the labour market. The following are among the forms these bridges can take:

(1) An alternating approach can be taken, in which part of the time is spent in the education system, this theoretical training being followed by a period of practical work experience, after which the trainee returns to the education system and obtains a training certificate.

(2) The same training process can be organised on a parallel basis, in which specific stages of initial training or more advanced training take place in the course of the year parallel to the trainee's work on the shop floor. Both of these variants are designed to dissolve as far as possible the temporal and geographical division between training periods in the system of general education or vocational training and periods of employment.

The way in which this system of transitions between the education system and the job market is determined by the dual system of initial vocational training is also significant in terms of the bridges between employment and unemployment and the other transitional labour markets that feature in the diagram. Various research studies on labour markets have shown that those who have acquired a vocational qualification run a lower risk of unemployment than those who have not (Ryan and Büchtemann, 1996).

The same factor influences the transition of women out of and back into the labour market as a result of temporary private domestic responsibilities or child-rearing periods. Research has demonstrated that those women who have attained higher vocational-training qualifications are more strongly motivated to return to work after these domestic phases (Mayer, Allmendinger and Huinink, 1991).

So in these cases too, initial training has a very great bearing on an individual's chances of successful transition. In-built inequalities in the job market, whereby a woman's perceived aptitude is systematically downgraded by her absence for domestic reasons, can be mitigated by the strength of her formal qualifications. Many women's prospects of returning to work are enhanced by their having undergone vocational training alongside or after their general school education.

Many "transitions" take the form of mobility within the labour market. Initial vocational training can have a positive impact on the whole dynamics of mobility, particularly upward mobility (Blossfeld, Hannan and Schömann, 1988). This causal connection, however, has been loosened in recent years, particularly with regard to career patterns in the public sector (Becker, 1993). Whether successful products of the vocational-training system enjoy better careers within particular companies has a great deal to do with the link between such initial training and access to the system of advanced training. It is increasingly a matter of crossing the "bridge between school and work" several times within one's working life.

The education system can no longer be regarded as a process that the individual undergoes once — usually at a young age — before settling down to a life within the labour market. Increasingly rapid economic, social and technological changes now dictate a number of different "transitions". Further education and training should continually inject fresh impetus with which individuals can develop and flourish within the labour market.

Further training in Germany is mostly of the in-service type, either "on the job" or "off the job", i.e. taking place partly during working hours or at least while the trainee is under contract. Other systems can be observed in Scandinavian countries, where the system of further training involves sabbaticals of several weeks' duration or of three months or more (up to a maximum of 12). During these sabbaticals the individual obtains further training, which may or may not be relevant to his or her current occupation; these trainees are then able to return to work with their employer under the same contractual terms that applied before the sabbatical. Other countries of the EU have similar arrangements, but they are usually more restrictive, or the allowances in lieu of pay are less generous.

Attendance at further-training courses is still very heavily dependent on success at school or in initial vocational training and the acquisition of the relevant qualifications. (Schömann and Becker, 1995). There is also an unmistakable link between levels of initial vocational training and career continuity, in other words the length of periods of uninterrupted employment. The probability of a transition from employment to unemployment or *vice versa* is strongly influenced by attendance at further-training courses. Initial vocational training, then, has a powerful long-term impact on individuals as well as on the whole of society, an impact that is also determined to a considerable degree by subsequent stages of the vocational-training process.

The pension-funding system, known in Germany as the "intergenerational contract", is also affected by the fact that those who have received initial vocational training enter the labour market at a very early stage and spend many years contributing to the state pension scheme (both employers and employees pay 50% of the total contribution), thereby "earning" or saving up for their pensions. A completed process of vocational training therefore represents a considerable contribution to the current generation of pensioners, just as lengthy service influences both the pension scheme and the transition from work to retirement and receipt of a pension. The paths and implications of the vocational-training system can thus be traced throughout an employee's working life, revealing how initial vocational training continues long term to be one of the factors which determine the structure of the German labour market.

3. *A comparison between specific transitional markets*

In the Federal Republic of Germany there is a relatively high degree of probability that the threshold between the education system and the labour market will be successfully negotiated. 2.5% of all employed persons in Germany made that transition in 1992, while 2.6% crossed over in 1995. According to Eurostat data, these figures were rather lower in Italy, with 1.5% of the national labour force having been recruited direct from the education system in 1992 and 1.6% in 1995.

There can be many reasons for this. One possible explanation is the strong integrating force of the dual training system, which forges quite a useful link between the education system and the labour market. Many young people in Italy want to enter the labour market but cannot find jobs, because an insufficient number of jobs are available to new entrants. Only after a certain period of unemployment or inactivity, in other words after considerably lengthier job-hunting, do young Italians finally enter the labour market.

Let us now turn our attention to transitions from unemployment to employment. In Italy there is quite a high positive differential between the number of people who move from employment to unemployment and the number of those who take the opposite route; this differential rose from 1.8% in 1992 to 2.4% in 1995. It emerges that the sum of movements between all four transitional markets and the labour market in Italy is higher than in Germany, where a negative employment balance of -2.3% in 1992 had developed into a surplus of only 0.7% by 1995 (see Schömann and Kruppe, 1996).

So in the labour market as a whole, greater mobility is observable in Italy than in Germany. It may perhaps be said in general terms that a well-developed system of vocational training is a good basis for entry into structured careers. On the other hand, we can also conclude that a well-developed system of further education and training preserves flexible access to employment for the jobless.

Such employment balances for all European countries (Schömann and Kruppe, 1996) demonstrate that the risk of youth unemployment is smaller where the system of initial vocational training is well developed. Every vocational-training system has its own inherent risk factors, such as the risk involved in preparing candidates for relevant major vocational qualifications. We can also learn lessons from Italy — for example, how intensive further education and training can be used to compensate for a less structured system of initial vocational training.

From studies of further-education patterns among individual age cohorts in Germany (Schömann and Becker, 1995), we know that people born around 1930 and 1940 had completed their vocational training by the age of 18 or 19 and spent the next five years receiving quite intensive further training, which seldom continued beyond that period. This phenomenon resulted in a certain tendency to go stale, in other words in stagnation of the human capital represented by the workforce. It still takes a great deal of effort to bring about gradual change in attitudes to further training across the entire age spectrum.

Ideally, successful initial training should be followed by employment in which individuals need to acquire further training to supplement what they have already learned. Further education, then, should be regarded as a process of putting things into perspective. The structure of further education and training is very clearly determined by the system of initial training. Too little account is taken of further education — in Germany too, unfortunately — when initial-training curricula and profiles are devised. In the coming years, further vocational education will have to assume far greater importance if both the professional success of employees and the economic successes of businesses, regions and industries are to be guaranteed.

4. *Current controversies in German education policy*

The globalisation and internationalisation of production and services has placed the employment structure and hence the vocational-training system in a serious quandary. Globalisation has led to the virtual disappearance of some occupations which still had good prospects until the eighties and even into the nineties, when the hub of the production processes in question shifted to other regions, particularly to Asia and Eastern Europe — as happened with the steel industry, for example. The response of the vocational-training system has been to provide training in a different range of occupations, with greater emphasis on service occupations. There is no point in issuing qualifications in trades that simply have no future.

The organisational changes wrought by technology have also been a motivating factor underlying the redoubling of efforts to update training curricula and profiles. The response time of the vocational-training system, in other words the speed with which new occupations can be defined and with which management, labour and government authorities can agree on reformed training curricula, is assuming ever-greater importance and can be crucial to the survival of the dual training system. The fact that these days such modernisation processes are being completed within a year, including consideration at the various collective-bargaining levels, by the hierarchy of government authorities, by regional bodies and finally within individual works, is proof that the social consensus enjoyed by this training system in Germany remains as yet unbroken. It also proves, however, that the various players have read the signs of the times and are fully committed to resolving the questions of the quality and quantity of training opportunities within the dual system.

5. *Propositions on the modernisation of the training system*

From research into lifelong learning (Tuijnman and Schömann, 1996), it has clearly emerged that high-quality initial training remains the alpha and omega of successful investment in further training. The probability that individuals will undergo further training increases with the level of qualification they achieved on completing their initial training. So if they enjoyed superior training in earlier years, they will be more likely to engage successfully in further education afterwards, thereby generally reducing the risk of unemployment.

That sort of superior vocational training has now become a *sine qua non* of success in the labour market, at least in Germany. It cannot, however, guarantee that success. Another possible response to high unemployment, especially among young people, is to incorporate into the school curriculum a greater amount of material that will prepare young people for a subsequent diversity of labour-market transitions as well as giving them detailed guidance on the opportunities and prospects that await them in the labour market and in their working lives. It seems to be the case that young people's origin and family situation, the occupations of their parents or close relatives, etc., still greatly affect their choice of jobs and training courses. The general school system must do more to address this situation and these challenges during compulsory schooling, for it is in the home and at primary and secondary school that most of the seeds of success in vocational training are sown.

In this way, analyses of the impact of vocational-training systems and of their interaction with systems of further education and training can pave the way for definite reform proposals for the general school system. The purpose of the annexed diagram is to illustrate the fact that in the Federal Republic of Germany policymakers in the fields of employment and education are trying to make the transitions between the various satellites of the labour market — private households, unemployment, the unemployment insurance scheme and the education system — better organised and more transparent. Such analyses should make it easier for individuals to set new career targets if they so wish and to pursue them.

Perhaps one of the main aims of initial vocational training today is to teach people how to learn, especially within the context of their work — in other words to teach them how to learn from and in the practice of their trade or profession. Providing the opportunity to alternate between learning in school and working and learning on the job, whether in rapid succession or over longer periods, is one of the most important functions that can be ascribed to initial vocational training today. How any given society organises that process seems to be of secondary importance. The main point of the new strategy and initiative should be to create a truly lasting bond between working and learning, a bond that permits a wide variety of transitions between education and employment, irrespective of the age, educational attainment, occupation and professional experience of the person concerned.

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5 Training For Professionalism Development

Benito Echeverría; Sofia Isus and Lander Sarasola

Major Transformations

A big structural transformation (Castells, M., 1997) is characterizing the last 20th century years (Toffler, A., 1971, 1980, 1990). We are entering in a *wisdom* society where knowledge is essential for developing any socioprofessional activity. In a sensible way, J.Lebret has defined this society in such an immortal phrase: *"A being civilisation, with an equal part of wisdom"*.

Several factors are shaping it, but these are the more outstanding (Caspar, P., 1994):

- *Change acceleration*, basically linked with sciences, technologies and techniques widespreading (Quintanilla, M.A., 1989; Echeverría, B., 1993).
- *Complexity development*, generating new socioprofessional behaviours (Cacace, N., 1994).
- *Interchanges and production systems disintegration*, conjointly with the growing importance of creation and management activities.
- *Relationships internationalisation and European Union construction*, with increasing connection networks in which many of the agents involved in any socioprofessional activity depend upon.

- *Important transformations in the labour market*, with decreasing less steady jobs, more labour flexibility and emergence of self-employment, teleworking, and so on.

- *Continuos evolving of points of reference*, with the consequent risk of group and individual identity lost in an increasing comprehensive world.

- *Vivid quest of a wider socioprofessional competence*, in a world where mobility is imposing itself as a culture in itself.

These and several other factors require to invest mainly in *intelligence*. That is to say, they pose the need of arousing, mobilising and educating the capability of *"inte-lligere"*, both people in particular (Carrascosa, J.L., 1991), as political, economical and social systems in general.

This evolution is more clearly perceived in the three great transformations that characterise the millennia shifting:

- *Technological transformations*: microelectronics, "mother"of technologies used in every electromagnetic tool, -office automation, robotics, hydraulics, pneumatics, computer numeric control, CAD-CAM, etc.- has transfigured labour activity in the last twenty-five years.

After computer revolution, it has come the biological one, which incides in the most essential aspects of our physical lives (Ruiz de Elvira, M., 1997), allowing the manipulation of both alive organism components-biotechnologies- as its chromosomes and/or heredity -genetics engineering-

It is symptomatic that atoms and enzymes have led the 1997 Nobel Prize.

Furthermore, the information technologies have influenced not only our living and working forms, but also our way of thinking, being and behaving in the *homo videns* digital society (FAST, 1986; Amat, N., 1990; King, A., & Schneider, B., 1991; Cebrián, J.L., 1998).

- *Economical Transformations*: in the communications new world, there are no places anymore but influence cores interrelated in a shared network.

This fact proves unmistakably in almost every human activity, but especially in economy. In this, universality has stopped to be something abstract coming down specifically in a summary of contributions (Estefania, J., 1995).

In the European Union, the free circulating capital, the EURO convergence criteria, the world-wide entrepreneurial merger, the synergical stock market flows and so on, are just a few signs of the economical universalisation which we are already sharing (CEE, 1994b).

It is foreseeable that this will be a distinctive trait around the 20th century first decades.

- *Social transformations*: joining these two great transformations there are another phenomena shaping the things to come.

For example, the life expectancy is growing while the birth rates are decreasing in the developed regions in contrast to poorer areas. Unemployment has become a structural event, especially affecting people over 45 year old, young people and women. Migratory movements are perceived every time with more suspicion, if not with xenophobia. The only way out for many of these groups is underground economy.

Macrosocial transformations are even more radical (Díez, J., & Inglehart, R., 1994). The inequalities between northern and southern countries are growing, being the former increasingly richer and the latter increasingly poorer. Even in developed countries, the welfare has reached the crisis point (De Cabo, C., 1986; Johson, N., 1990).

None of its governments dares to sign its "death certificate", but the amount of politicians showing preference to let it "die of starvation" is growing (Mishra, R., 1994). It is questionable the present debate about a sustainable wellfare (CEE, 1994a; SEE, 1996).

Deep Changes

These major transformations have generated, directly or indirectly, relevant changes in production and socioprofessional organisations (Delcourt, J., 1991), as well as in its developmental social forms (AIDIPE, 1995). Today, almost everybody is facing a new reality:

- *New working contents*: The labour activity decreases in the primary production, specifically in the regions where it is less mechanised while it is kept up in the areas where the "overall agricultural revolution" was assumed during the last 25 years.

  Further, nearly all developed countries have lessened the professionals demand in the secondary production, increasing it though in the tertiary one. Services in general, but especially some of them -health, education, security, gerontology, hotel trade and tourism, etc...- hold presently the higher demand for working posts. It is predictable that the trend will keep on raising through the next decades (Cacace, N., 1994).

  Equally foreseeable is the growing activity in the quaternary production. The information age (Carrascosa, J.L., 1991) will require an important and fine professional group with a multifunctional training (Hamel, G., & Prahalad, 1995). This will mean quite a relevant qualitative change in the employment supply and demand.

- *New working means*: Technological transformations have contributed to free us especially of certain physical tasks hardness (CFNT, 1994). In contrast, they require much more mental fluency and flexibility in order to face socioprofessional activities.

  It is symptomatic that the generalised use of computers and also of magnetic cards, autotellers, mobile phone networks, telesales and so on, have changed most of our lives in such a short period of time.

  In nearly a decade, the information highways have caused a revolution in many working forms (Badillo, M., 1996). Electronic mail has taken the place of fax machines just as this displaced, in a longer period though, telephone which has reduced slowly the ordinary mail traditional functions. Something similar is happening with Web pages which quickly solve the typical misinformation problems although they are generating the necessity of identifying the information wanted, where to look for it and how to select it.

Informatics and communications joining -telematics- is opening a future that can make to fall into disuse many of the present working means, even in the education and health realms (Hamel, G., & Prahadal, C.K., 1995).

- *New working methods*: The production means and contents evolution has influenced especially the working organisation (Winslow, CH.D., & Bramer, W.L., 1995). At the same time, the Ford's production means hierarchical organisation tends to disappear, more flexible working structures emerge intended to take the maximum advantage of every employee qualifications and competencies (Mateo, J., 1998).

  The permanent innovation required by goods and services markets -shorter mass-producing, higher investments in design and refinement- has become in a great flexibility in working organisation conjoined with an employees displacement inside wider functional areas quite overlapping among them (Retuerto, E., 1991).

  "Preachers" of new entrepreneurial management paradigms -P.Drucker, P. Senge, M. Hammer, D. Nadler, C.K. Prahalad, etc- reveal some of its future traits: a) Lessening hierarchical structures and emphasizing working-teams; b) Permanent disposition to learn; c) Constant attention to key processes; d) Flexibility and adaptation to changes and complexity; e) New executive and employee roles; f) Professional competencies combination and interdisciplinary nature; g) Human resources management.

  The question posed by Andersen Consulting in its last Spanish publicity campaign is quite vivid: "Who says that great talents are not able to act together?"

- *New working social forms*: The whole of changes stated till the moment, is influencing as well into a new form of understanding work (Meda, D., 1995; Bidet, J., & Teixier, J., 1995; Tripier, P., 1996).

While employment centrality has been questioned since long ago (Racionero, L., 1983; Garcia Nieto, J.N., et al., 1989; Godet, M., 1994; Offe, C., 1994), the amount of people who have got not a job has been increasing (CEE, 1994b), and many others who have it, feel uneasy about their own professional future (Férez, M., et al., 1997).

The current debate about the working week time reduction (Jáuregui, R., 1996), it is just the labour flexibility tip of the iceberg that is coming (AEDIPE, 1995). A future which is already present in a growing number of short lasting contracts, part-time and weekend employees, subcontracting, "disposable" jobs, increasingly managed through temp recruitment agencies, basically in the countries where there is not so much tradition in this kind of organisations (Portilla, M., 1995; Gimeno, 1996).

Joining with these contractual forms of jobs, there are another autonomous ones which are fostered by the mentioned transformations. Self-employment is recovering a part of its former protagonism, often favoured by institutions as a struggle against unemployment.

This ancient and new form of self-employment is performed through means such as teleworking (Ortiz, F., 1996), franchises, and so on, generated after the century ending major transformations.

Capabilities > Qualifications > Professional Competencies

It is obvious that the big structural transformation in the last 25 years has changed the labour scene and consequently, the professional requirements (Retuerto, E., 1996, 1997).

- In the 60s'-70s', **capabilities** were essentially required in order to carry out activities defined and linked to a particular profession (Roig, J., 1996). The notion of *task* had priority over the notion of integrated *function* in the entrepreneurial system. *Prescription* and *instruction* were more important than *joint responsibility* and *initiative* promotion inside the system. A *segmented* and *additive task organisation* viewpoint was shared, and *action interdependence dynamics* among several functions were rarely required in order to preserve and improve the company-system.

- From the 80s'on, professional **qualifications** began to be required including acquaintances and skills to conduct a wide range of labour activities (Alex, L., 1991). Mobility as culture was recognised, demanding an adaptation ability to a sensible fulfilment of a relatively broad range of variable functions, in accordance with recent times (Sánchez Asiain, J.A., 1996).

  One of the major outcomes of this perspective, was to value *individual* qualifications related to *structural* and *institutional* qualifications (Sellin, B., 1991; Echeverria, B., 1993, 1996; Sarasola, L., 1996).

  Since then, it was established that the best use of an individual qualification depends closely on the structural setting where he or she is able to carry it out -*labour market supply and demand*- (Cacace, N., 1994), and also on the training institutional ambits -*professional qualifications demand and improvement*- (López, F., 1995; Teichler, U., 1995; OCDE, 1996).

  For example, is it necessary to train many freezer specialists in the North Pole? Do residents in the country have similar qualification possibilities than those living in the city?

- Since the beginning of the 90s', this qualification intersection imposed a deep professional profiles reconsideration which progressively tend to be defined in **action competence** terms (Green, A., 1998).

  French employers introduced this technical term in order to *describe the learning process outcomes*. They succeed in viewing the training and educational systems results, not as much depending on given acquaintances and skills but according to acquired competencies (Gick, A., & Pallarés, T., 1997; Jolis, N., 1997).

  Indeed, competence differentiates between the needed knowledge to cope with specific settings and to be able to face these same settings in real life (Nijhof, W.J. & Streumer, J.N., 1998).

That is to say, "to know how to mobilise knowledges and qualities to cope with problems" (Mandon), derived from professionalism performing (OCDE, 1997).

Today, and maybe more in the future to come?, professionalism is defined by the dialectic relationship between the post held and the organisation where it is carried out (Echeverría, B., 1993). It demands a "dialogue". That is to say, a *confrontation* in which there is a kind of agreement in disagreement but, also consecutive position changes inferred through each of the "contrary" positions (Sarasola, L., 1996).

It can be advanced that professional competence is held by those who own acquaintances, capabilities and needed attitudes to perform their professional activity in itself, those who solve problems in an autonomous and a creative way and are capable to contribute to their labour environment and to work organisation (Bunk, G.P., 1994).

Specifically, those who show to hold four basic competencies which adding up shapes the professional action competence (Echeverría, B., 1996):

- *Technical*: To own specialised acquaintances related with a particular professional realm which allow to have a good grasp as an expert of tasks and contents according to the professional activity.

- *Methodological*: To know how to apply knowledge to particular labour situations, to use adequate procedures to concerning tasks, solve problems autonomously and transfer wittily the acquired experiences to new situations.

- *Participatory*: To be aware about labour market evolution, predisposed to interpersonal understanding, well-disposed to communication and co-operation with everybody and to show a group-directed behaviour.

- Personal: To have a realist image of oneself, to act according to the own convictions, to assume responsibilities, to make decisions and to diminish the importance of possible frustrations.

Summing up, in order to be a professional with future not just to have acquaintances -technical competence- and to know-how -methodological competence- are needed.

Furthermore, it is necessary to know how to staying on -participative competence- and to know how to be oneself -personal aptitude- (Barreda, R., 1995, 1996).

Education and Vocational Training

In order to provide access to this "carrerquake" (Watts, A.G., 1996) political actions are needed, but also to overcome a merely instrumental approach to training and socially recovering the essential function of education. That is to say, fostering the person achievement basically to learn how to be oneself wholly (Faure, E., 1973, Botkin, J.W., et al., 1990).

This goal can be hardly reached through the several formal educational systems, given the trend to prioritise knowledge acquisition to the detriment of another learning forms. Due to this, it is essential to "conceive education as a whole" (Delors, J., 1996), structured around four basic learnings:

- To learn *to know*: To increase general and specialised knowledge allowing to understand better the several facets of the own environment, stirring up curiosity, figuring out reality and encouraging critical judgement. That is to say, training attention, memory and convergent and divergent thinking to teach how to learn learning.

- To learn *to do*: To favour experiences that demand to locate, select and use relevant informations for specific objectives, to cope with different labour settings, to assume risks, to envisage consequences, to communicate and to work in a team.

- To learn *to live together*: To develop the capability of perceiving human-beings diversity, to make aware about similarities and interdependence, to favour behaviour attitudes tending towards common goals, to prepare to cope and solve conflicts considering options plurality.

- To learn *to be oneself*: To lend free thinking, judgement, feelings and imagination people need for their talents reach their own plenitude and be able to keep on shaping their fate as much as possible.

This overall approach to education demands teaching and training systems (Echevería, B., 1998): a) *Complete*: Embracing every educational factor that make feasible the professional action competence development; b) *Flexible*: Permanently adaptable to structural changes and ready to offset its possible negative effects on the several employees groups; c) *Motivating*: Capable of encouraging learning processes allowing people to take advantage and use every chance they have at the time of updating, deepening and enriching their basic training; d) *Integrating*: Prepared to bring together all training suppliers efforts and to connect them with the labour market demands (CEDEFOP, 1990; Achtenhagen, F., et al., 1995).

This means a progressive interpretation of general, vocational and continuos education, being increasingly difficult to clarify what is learnt at school and what is learnt with professional practice (Retuerto, E., 1991).

As it was pointed out by the CEE (1991) Memorandum about vocational training: "The abilities provided by *training systems* are more and more referred to educational values, particularly related to acquaintances about behaviours and relationships, while *basic educational systems* want to provide a professional abilities foundation. This progressive interrelation between the two fields -education and training- constitutes an essential fact during the 90s' " (p.5).

In this approach, we place three great realms that from our viewpoint shape vocational training (Echeverría, B., 1993, 1996, 1998).

1 **Basic Vocational Training (EPB)**: This is such an important stage for the professionalism future development that we often state: "The best vocational training, is a good basic education". As our society is evolving, we share the wish posed by Montaigne to his son's teacher: "First, well-done minds. Second, full up". On one hand, EPB must to foster representational acquaintances development not forgetting the operational ones, as well as science, technology and technique integration (d'Iribarne, A., 1989). On the other hand, the dialectic relationships between curricular contents and the changing professional world nature, must be favoured (OCDE, 1997). At the same time, the transition from youth to adulthood has to be prepared through professional or training activities.

2 **Initial Vocational Training (FPI)**: Its essential function is to develop a set of acquaintances, skills, capabilities and attitudes, linked to action competence and required by the big professional *families*.

Some time ago the Spanish philosopher Ortega y Gasset (1989) stated: "To be an expert and just an expert is to be able to be everything and consequently not to be anything in particular". Today, his idea gains a renewed sense, because professional specificity and early options are each time less useful.

At the very least, in this aspect of vocational training is essential to attain this two goals: a) To provide multifunctional and technical training in order to allow the possibility to forestall consciously technological and organisational changes related to the own profession, as well as the needed integrative and overall professional knowledge perspective; b) To acquire a professional identity and maturity, motivating future learnings and adaptations to required professional competencies change.

3 **Continuos Vocational Training (FPC)**: Its functioning was clearly established by the European Communities Council resolution about permanent vocational training (05.05.1989) around four main objectives:

- Professional *integration and/or reconversion* of unemployed youths and adults, recently contracted employees and/or in partial or total employment situation change.
- *Permanent adaptation* to the professions evolution and to the new jobs configuration, as well as to the professional competencies improvement.
- Employees social promotion, in order to make feasible the overcoming of their professional competencies and the improving of their social status or personal development.
- *Prevention* before the future consequences of the labour market evolution.

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Workshop 3
Action, Innovation and Accompanying Research

Owe Liljefelt[115]

The workshop 3 had to deal with the topic of research *(please check title)* into 'practices, innovation effects on a ... '. ... Contributions from five European countries have been dealing with this issue. *They have been commented on by the other participants coming from the same or third countries*. ...As a rapporteur rather than to go into detail of each input and project which has been presented I try to grasp at a more general level and to advance a few topics we all agreed upon and/or which were at the core of our discussion. However, I will finally say a few words about research into practices and try to raise a few questions around that problem.

Not knowing the degree of difference of the education and training systems of each European country, but the countries' school systems I know seem to not really to understand what's going on, namely learning is taking place not only and may be not merely within the school system itself: That means that we take into account more thoroughly the labour market, work organisational issues and the working life environment. This is not very new for most of the EU-Member States but at least most of the Scandinavian countries this approach to education and training is rather new. The policy level has not even taken note of this discussion so far.

Another question which has been raised and seems to be of equal importance is that the standards, quantity and quality, of teacher training and more especially the vocational teacher training, is also undergoing a deep transformation.

Another phenomenon *which we also have to take into account* is that if we talk about research into practices, it also means *that research* has to deal with both the policy level and the operational level. And we have to think of different solutions *in terms of content, method and organisation* to this problem and these reflections may have to quite different in the different EU member states. For instance, networks have been established between vocational upper secondary schools between several countries. However, this has been developed more between schools than between other training

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[115] Cedefop expert

Centres. To look again on Scandinavian countries, this seems to be more developed between the schools than between the policy level, and indeed even more elaborated, or established then it is the case of teacher training institutes.

A more general point has been raised by Graham Attwell from Bremen University and we rather all agreed upon: the fact that we must decide how we could solve the general problem of reaching the point where we can say, now we are talking about the same thing. So there are so many differences between different cultures and different school systems, and even if we think that we scientifically can agree upon one definition or a general concept we still have problems to apply them in and between the different countries. This is especially related to the problem of comparability. The question which was raised was: yes, but what exactly are we going to compare. If you have worked together with people in different countries, you know that a lot of time you consume before you really know what exactly you are going to compare. ...

Another issue which could be deduced from the discussion was: what is the *nature, scope and objective* of these comparative studies. I think it was a common opinion too that the policy level would mainly be interested in questions related to 'how successful' the different national measures and reforms are, however, this is not exactly what the research community would raise as an issue. You see this a researcher from a different angle. Such studies could also be launched by and within the different ministries in different interested countries and do not necessarily need to involve scientific researchers

A more pragmatic approach to this question has been introduced by a study presented by Eva Kuda/IG- Metall and Jürgen Strauss/Sozialforschungsstelle Dortmund. They elaborated very much on the problem.

We also had a discussion about how to relate comparative descriptions to comparative analyses. Again it was also more focused on analyses of the different problems and not on descriptions.

Another basic issue on which we talked a lot and which was discussed in connection with the different country reports was the time factor, namely that the Leonardo *projects' life span* would be too short and also involve too many countries.. So the answer to that problem is to prolong the time of the studies and to limit the number of countries involved in order to enable a closer co-operation and a better co-ordination. Of course, this is a general problem but could not of course be a general policy because it depends on what kind of studies you are aiming at and what kind of programs you want to describe and solve with the research. Another problem connected to this is the chance for political solution. One of our contributors raised that question and said that it's very hard to transform political solutions within countries, and it's even more difficult to transfer them between countries. However, some political bodies may have these intentions and this could be seen in the Nordic countries especially - I am not so much familiar with other countries in that respect.

Another issue raised by politicians would be how to deal with unemployment, and we got a very interesting report from the ?.. union in Spain about how to deal with older workers, and what kind of competencies they need. The Spanish gentleman (name) raised the question: is it really that what we want: to offer educational and training programs in order to prepare older workers for reintegrating into employment, or should they in a way be prepared for 'early retirement'??? This question would become even more interesting if you look at the initial vocational education of young people and more especially at their drop-out-rate. Are they going to be equipped with still some competence in order to get a job, or shall we try to get them back to school in a way?

In that respect, some of the contributors emphasised the need for training in small groups. It was also raised by our German friends and picked up by other members too. It seems that the policy today is asking for more individual solutions and favours learning in small groups or even individual learning efforts.

Another point raised was the question of transferring external into internal education/training previsions developments. This was mentioned by several of our contributors as a rather general problem. The external changes in the working life environment, within the wider economical and social contexts, how are they affecting and influencing the development of education and training in the different countries. Another way to take into account these problems would be to differentiate between a 'linear' approach and an 'active' approach *(needs explanation).* Those countries I am familiar with are more or less working with and have employed a more idealistic 'linear' approaches. It may be necessary for the research community to better inform the policy level on the different possible approaches from which they then may expect respective outcomes and to start a discussion about these two approaches more especially.

We were also discussing methodological approaches: And in fact, we were encouraged primarily by Graham Attwell and Anja Heikkinen.to adapt an inter-cultural approach for studying the different phenomena. There was a large agreement that researchers in VET have not so far developed more sophisticated methods for comparative surveys on their own, however, they draw from neighbouring disciplines e.g. labour economics, (adult) education and sociology etc.. This would be quite acceptable in order to get a starting point for developing methods within the VET area. ..

I personally do think that we are more and more concentrating our discussion in Europe on solutions to the labour market and to work organisational problems; and VET will be one major or at least important part of these solutions. More comprehensive and idealistic 'education' and 'training' policies will under these conditions come under pressure. These trends are largely influenced by the American experience and economy. The American economy seems to be on its way to re-establish as a super (economic) power. In Europe most social partners and many politicians, even with different colours, want to profit from and to copy this re-establishment. They seem to have only a few ideas on their own how to do it better.

Finally a number of critical aspects concerning the Leonardo programme and its contribution to VET-research and to comparative research have been raised. Some asked whether any of the Leonardo projects would really be appropriate, are they adequate to solve at least some of the issues and problems discussed. And I think that the answer to that question among the working group 3 was that the Leonardo projects are too short and too limited to really have a lasting influence on the different levels of policy intervention in the different countries. Of course, any body has quite different experiences including myself: very good results and no or, even worst, very bad and dangerous results do coexist. The question whether Leonardo projects are appropriate in terms of developing a VET-Research-culture on the European and International level, are they equipped for this purpose in an adequate way, are they organised and financed properly in order to solve the problems they intend to solve and which only partly were discussed in the working group 3?

Research into practices, action research, finally has a long way to go. May be the answer could be as simple as some of the members said: We should try to better mix working groups with both researchers and people from policy or social partners' responsibility for instance. Most important is however that researchers are better 'selling' their findings or are getting a chance to better sell and disseminate their results on the one hand but also undertake stronger efforts to write contributions, summaries and reports which are better understood by the general public and by policy makers and social partners. The worst thing is: Excellent results who nobody knows of. That's why I would say: Let us try to write other reports and papers we usually write, not merely addressed at the research community but merely addressed at the clients which are empowered and interested to put results into practice.

1. Collaborative and Comparative Approaches to Researching VET

Graham Attwell[116] *and Jenny Hughes*[117]

Traditionally, vocational education and training has not been seen as a profession in itself as, for instance, medicine, school teaching or the law discipline. At a research level, VET has been encompassed by a variety of different disciplines - including psychology, pedagogy, social-economic, labour market research and work science. Planners and policy makers in vocational education and training have likewise been drawn from many different fields. The failure of vocational education and training to gain recognition as a profession is reflected in the relatively low prestige and rates of pay for vocational teachers and trainers. It may also be seen in the generally low levels of training for people working in the field when compared with established professions.

The project we are presenting here on 'New Forms of Education of Professionals in VET' (EUROPROF) is a two year Leonardo Surveys and Analyses project bringing together researchers from fourteen different European countries. The long term aim of the project is to develop a 'community' of VET researchers and practitioners and to promote the 'professionalisation' of VET; in other words to gain the recognition of

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[117] Centre for Research and Education Development, Wales

VET as a discipline and a profession in its own right. In the shorter term, the project aims to build an international network of VET researchers and to develop new qualifications for VET professionals, planners, teachers and trainers, through a European Masters (MA) qualification to be offered in universities in different European countries. The very ambitious aims for the project, together with the national diversity of the partnership and the spread of disciplines, interests and approaches of the project scientists, has posed a serious challenge in terms of the development and application of methodology. This paper will examine some of the questions that have been raised and some of the approaches the project has adopted.

From comparative to collaborative and back again.

More specifically, this paper will examine the reasons why it was decided to progress from a comparative approach to a collaborative approach to surveys and analysis but then goes on to suggest the need to progress beyond even the collaborative approach and proposes that a revisiting of comparative methodologies is needed.

The initial movement from comparative to collaborative work was driven by frustrations with the paucity of analytical tools available for interpreting comparative VET studies. It is proposed that these limitations could be overcome by developing or 'borrowing' and adapting tools drawn from a wider range of sciences than in the past. In particular, it is necessary to generate analytical tools which consider not only the nature, aims and practice of VET research but also its values, meanings and its relationship to VET practice. Such an analytical tool must be sophisticated enough to take into account the context within which VET operates in the different societies of Europe. From this viewpoint it is suggested that tools and approaches drawn from cultural sciences, in particular Fregeian semantics, Marxism, semiotics, pragmatism, post-structuralism and super-structuralism may prove a fruitful area for VET research.

The first stage: from descriptive comparisons to collaboration

At its outset the EUROPROF partnership attempted to move beyond traditional 'descriptive' comparisons and develop a new 'collaborative' methodology. Until recently trans-national research in VET has been focused primarily on the tasks of information gathering and exchange. Typically, experts from different countries agreed on a common format for information collecting and published what were often point to point mapping studies. Many of these reports were undertaken by CEDEFOP who sponsored and generated a wealth of cross-national, national country and sectoral or thematic studies in VET. Such an exercise was necessary in order to develop a sufficient knowledge base for survey and analysis type activities to take place.

This methodology, however, was insufficient for the goals and aims of the EUROPROF project and also the existence of an ongoing CEDEFOP study of VET teacher and trainer education using a comparative approach would have resulted in duplication. The EUROPROF project has developed the idea of collaborative research, both through building trans-national teams to focus on common research questions (See figure 1), and through a process of mutual learning based on national research (Heidegger, 1996). The aim was not to transfer features from one national system to another but rather to use the analysis of different national systems as a springboard for the development of new ideas and innovations. Whilst the project addressed its findings to policy makers and planners, the driving force for change was seen as from the bottom up, in changing the practice in the different partner countries and in developing 'model projects' within EUROPROF which could collectively serve as an observatory for evaluation and reform. As such, the project was based within the tradition of 'action research'.

Research Questions

How do we define work process knowledge?

What is the relationship between Vocational Education and Training, Human Resource Development and Regional Economic Development?

What is the connection between collaborative research and comparative research?

What are the 'shaping skills' required for 'anthropocentric' production?

How does VET respond to new European occupational profiles, cultural diversity and curriculum flexibility?

How is the project to be disseminated and how are new programmes to be developed for educating VET professionals?

Development Tasks

The development of new forms of Vocational Education and Training and Human Resource Development for 'social organisation of innovation' and life-long learning.

The examination of the strengths and weaknesses of existing provision of education for Vocational Education and Training professionals in the member states of the European Union and the identification of the opportunities for new programmes and provision.

The identification and development of new occupational profiles for VET professionals.

The development of new curricula for the education of VET professionals and the launch of pilot programmes

A further step was to agree on a basis for collaboration within the field. The project partners identified and elaborated a series of common 'cornerstones' to underpin their work (Attwell, 1996) (see Appendix 1). Readers interested in exploring these further are referred to the Leonardo da Vinci publication 'Building a European Co-operative Tradition in Vocational education and Training: The Contribution of the Leonardo da Vinci Programme's Surveys and Analyses'(1998).

New tasks and Profiles: New Methodological Questions

The cornerstones served as the basis for a series of surveys undertaken in different partner countries. The F project did not set out to analyse and compare the present occupational roles and profiles of VET professionals, but rather to develop future scenarios (Heidegger, 1995). This aim influenced the methodology which lead the partners undertaking a series of semi-structured interviews and qualitative analyses instead of a quantitative survey. A further concern was to identify trends and changes in the activities being undertaken by VET professionals. The work of McLagen (1989, 1996) and surveys undertaken in Europe utilising the McLagen questionnaire (Ginkel, Mulder and Nijhof 1994; Odenthal and Nijhof, 1997) reveal changes in the functions of HRD professionals.

However they discount changes at three levels: Firstly, they ignore crucial changes taking place in the role and specific activities being undertaken. Secondly, they do not take into account these roles set against a background of new methods, activities and strategies being employed in teaching and instructing. Thirdly, they do not take into account the socio-cultural context against which these roles are played out - for instance the changes in values, attitudes and educational ideology. Functional analyses of the role of VET professionals as in the UK (NCVQ, 1994) similarly show only the tasks currently undertaken by VET professionals and also take no account of context. This important question will be addressed later in the paper.[118]

Convergence of trend: divergence of effect

The results of the studies have generated new methodological questions if the survey and analyses work is to be transformed into an ongoing action plan for the development of new programmes for VET professionals.

The process of collaboration has enabled the EUROPROF project to identify a series of trends and directions in the role and education of VET professionals in the different member states and reveals a complex and apparently paradoxical situation of simultaneous convergence and divergence.

Firstly, there is a broadening in the role of VET professionals in most countries in Europe. Perhaps of greatest significance is the increased attention being paid to continuing vocational training. Whereas previously the main focus for continuing training lay in the area of management development, the acceptance of ideas such as life long learning and the changes in work organisation are extending continuing training to include wider sections of the workforce and to encompass a broader curriculum. This means new responsibilities for traditional HRD specialists but also leads to a blurring in the division of roles between what was seen as the work of VET practitioners and that of HRD professionals.

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[118] Another reason for undertaking a series of interviews was the necessity to build networks for intervention and change. Individuals, institutions and organisations which serve as the primary source of information and data are important as potential agents for dissemination, impact and change. Project partners were and are organising national networks and meetings to disseminate the findings of the surveys, to validate the findings and to propose further activity to implement the outcomes in their own countries.

Secondly, as a result of this trend, there is a new emphasis on organisational learning leading to new roles for both VET and HRD professionals in organisations and enterprises and in initial vocational education and training.

The third area where roles have broadened is in the provision of vocational education and training for the unemployed. The task of retraining the workforce is seen as a major task in most EU states. There is a movement away from lower level, narrowly focused, instructional activities to a more holistic model which includes counselling, work placement and monitoring as well as the planning and management of more demanding retraining programmes.

Fourthly, the trend towards decentralisation of vocational education and training provision is leading to new roles in management. At the same time the emphases on situated learning and work process knowledge are leading to deep seated changes in the form and delivery of VET provision. There is a move away from instruction and classroom provision towards a new focus on the management of the learning environment and the identification, design and structuring of learning activities. This in turn is highlighting activities such as mentoring, coaching, simulating and facilitating rather than instruction and didactic teaching.

The trends thus indicate that reform of initial vocational education and training towards more work process related activities rather than classroom learning, is both broadening the role of VET professionals and, at the same time, leading to a convergence between the traditional roles of VET and HRD specialists. The primary role of both is now the management of the learning process.

However, if these changes are running in parallel in most member states, the way the effects of these changes are manifested in different cultures and their impact on national systems is not only complex but often divergent. For example, whilst occupational profiles are converging across member states, whilst the national labour markets are moving in similar directions and whilst (because of an increased internationalisation) new models of work organisation are being disseminated universally, the relationship between these elements and the relationship of these changes to different socio-cultural contexts is diverging.

Existing education for VET Professionals

The existing provision of education for VET professionals reveals a picture of inconsistency and fragmentation (Attwell, forthcoming). Not only are there very different patterns of education of VET professionals between different countries but provision varies within countries, within individual occupations, within regions and even within occupational sectors. The fragmentation of provision for the education of VET professionals may be seen as a reflection in the fragmentation of the national VET systems themselves. It is also a reflection of the lack of esteem attached to VET provision and also the uneasy status of VET in failing to develop as a discipline in itself rather than forming a sub-set of a number of related disciplines. It is generally within those countries with the most fully developed systems for vocational education and training, that the best practice in the education of VET professionals is seen.

The second stage: From collaboration to comparison

While it is possible to advocate professionalisation of the education and practice of VET professionals in Europe and to identify the general convergence of trends in occupational roles and profiles, the situation outlined above does not hold promise for the introduction of new common programmes between different countries. Realistically, the task may be posed as a series of incremental steps in moving from fragmentation to collaboration in VET professional education (Kauppi, 1997). However, collaborative research which promised the way forward a few years ago, is falling short of the high expectations the VET research community held and is still failing to deliver the theoretical models which would provide the research base for the training of VET professionals.

It is also clear that whilst earlier models of comparative research were of limited use, they cannot be discounted nor should collaborative research be seen as some kind of evolutionary process superseding comparative research. The information generated by comparative research provides the raw information base which is a pre-requisite for collaborative work and the robustness of much of the comparative work (both qualitative and quantitative) has done much to increase the status of VET as a research tradition.

Where comparative research mostly failed, however, was in the relatively unsophisticated and often simplistic tools for analysing the data so comprehensively collected. It is argued that the lack of such tools might reduce the value of the research being undertaken through action programmes like the Leonardo Survey and Analysis programme and retarding the development of a European research culture in Vocational Education and Training.

Traditions and Tools for Comparisons in VET

The early data gathering descriptive projects in comparative VET, particularly those based on 'point to point' mapping models, have been described above. However there are other significant traditions and tools which should be examined. Reference has already been made to quantitative analyses in the context of the McClagen and Nijhof surveys. Mention should also be made of the exhaustive quantitative comparisons undertaken by Sig Prais and others through the National Institute for Economic and Social Research in London. The limitations of such work lay in the large number of different variables affecting VET processes and practice and the subsequent difficulties in selecting appropriate sampling models for data collection.

Many projects are aimed at defining or predicting future directions for VET rather than designing curricula, delivery models and so on. This immediately calls into question the validity and value of using data based on existing practice which, although useful, is by definition limited. Quantitative data analysis requires qualitative analytical tools to relate outcomes to practice. Through their series of reports, the NIESR was able to argue convincingly that the UK had fallen behind other countries in the provision of vocational education and training and to suggest a causal link to productivity. However, the work is less authoritative in considering what might be done to remedy such a situation short of borrowing or copying other 'more successful' systems.

Theoretical perspectives in VET research: a brief history

In her recently published book 'Vocational Education and Apprenticeships in Europe (1997) Anja Heikkinen (see pp. ...) points to the "long domination of functionalist social theory (e.g. Durkeim, Parsons, Merton) for the current situation in comparative research." Heikkinen points out how such systemic models fail to take account of differentiation within societies – in division and structures of power, reflected in division of labour and externally formed in relation to other societies and in international divisions between sources of power and areas structured by power. She points out the inherent errors in Greinert's classification of VET systems, (based on the role of the state in VET), into market models, state-regulated models and school models. Heikkinen suggests that there are problems in using such models to gain a comparative understanding of apprenticeship.

Such reservations are equally applicable to a comparison of the education of VET professionals:

"Firstly they are using single separate criteria or characteristics, neglecting the complexity of VET". "We note a broad range of views which may explain certain phenomena…however no single one seems to be appropriate to interpret convincingly the developments overall" (Teichler, in Kivinen & Rinne, 1995 p.235)

Secondly they are a-historical and restricted to current, actual problems in VET pedagogy, which do not necessarily provide criteria for exhaustive comparisons.

Thirdly such classifications are in danger of producing deliberate abstractions from descriptive material, using diffuse categories and criteria, which overlap and are contradictory. As a consequence, such macro-structural models do not grasp the complexity of the world of VET, the action spaces and dimensions of vocational pedagogy and do not increase terminological comprehensiveness inside theory or practice of VET" (Heikkinen, 1997, p.272).

Heikkinen also points to the problems in adopting a Weberian 'ideal type' approach to analysing VET, particularly in defining criteria for contextualising different forms of education in society. It is difficult to determine the sources of power in society and studies have tended to neglect social and cultural dimensions. Other researchers who subscribe to the notion of 'ideal type' such as Deissinger construct models in which VET is seen as static and isolated and fail to take into account the cultural dynamics of vocational education. Whilst there is variation across 'ideal type' models, the outcome is always that VET systems are compared using their own intrinsic criteria, rather than by their relation to society and between societies.

Heikkinen recognises the need to understand the underlying complex interdependencies that characterise VET provisions as a prerequisite for comparisons. However, whilst proposing a methodological process based on the criteria of time, internal comparisons, comparisons with different forms of education and the need to place VET in a cultural context, she runs up against the lack of tools for undertaking such a task. The critical problem, therefore, with much of existing VET comparative research, particularly illustrated through the Leonardo surveys and analysis programme, is the inadequacy of the present theoretical frameworks and methodological tools for analysis.

Interpreting the convergence-divergence paradox

A suggested at the beginning of this paper, the focus of much comparative research has been the comparison of different paradigms in VET. Set against a common background of globalisation of the economy, the rise of multi-nationals and shared technologies, these paradigms show a marked convergence across Europe and there is a seductive similarity between, for example, work organisation paradigms, curriculum paradigms and research paradigms. This has increased the tendency to undertake 'point to point' comparisons across member states, often based on task or functional analysis. And yet the outcomes of such research, whilst providing descriptive data which empirically reinforces the notion of converging trends is often at odds with what VET researchers 'know' to be true and which the general populus assumes as 'common sense'; that is, that there are major cultural differences leading to apparently inexplicable divergences of practice. The challenge for VET research is to construct more robust tools for analysis which can accommodate and reconcile both the convergences and divergences.

Much of the existing comparative research takes as its starting point a single VET paradigm and deconstructs that paradigm into its elements. Thus, 'VET' would be the highest level of a tree diagram and the paradigmatic sets under observation would be branches below it. These may be labelled, for example, `employment patterns', `new production methods', `trainer training', `cultural issues', `curriculum' and so on. The elements or items within the paradigms would form the next level of branching. For example under `new production methods' there might be elements labelled `Just-in Time' or `island production' or `co-makership'. Under employment patterns there may be `self employed', `employed by SME', `unemployed' and so on. Each of these elements can also be subdivided into properties or descriptors (which are actually paradigms in themselves). For example `unemployed' could be expressed as 'average length of unemployment' or `number of unemployed males over 25' or `average qualification level of unemployed women'. The number and type of paradigmatic sets are similar across member states as are the items within each paradigm, hence the apparent convergence. Much quantitative comparative research maps and compares element against like element looking for differences in properties across member states. Occasionally it compares paradigm with paradigm but work at this higher level of aggregation is more often seen in collaborative research.

What is rarely taken into account is the syntax which exists between the paradigms, a syntax which is determined by the culture which generated it and is as culturally specific as the rules of grammar are language specific. The syntagmatic relationship (or syntagm) which defines the way in which one paradigm articulates with another is, for the most part, ignored but it is here that the divergences across member states are located.

What VET research needs is a grammar capable of analysis at a systemic rather than structural level. It needs a grammar robust enough and sufficiently rigorous to challenge and provide a real alternative to both functional and structural analysis but sophisticated enough to examine the cultural as well as historical realisation and meaning of sectoral and regional differences, national identities, gender, class and language etc..

Thus the model should not take `VET' as a starting point for the tree diagram and then simply dis-aggregate it - with `the cultural dimension' being a paradigm or even an element within several paradigms and the assumption that it lends itself to comparison as readily as unemployment figures. Rather we should put 'culture' at the top of the tree diagram with VET being one a disaggregated manifestation of that culture.

Functionalist analyses break down VET into a series of components that, not only, fails to recognise their significance within societies and cultures, but renders comparisons rather less than more meaningful. Structuralist and post-structuralist schools continue to pursue structures of likeness and contrast, differences played against similarities. It follows that if all the factors which determine VET culture are themselves different then the components of those features are bound to be different.

If the final level of dis-aggregation for analysing the role and education of Vet professionals is the VET professional itself within the culture of Vet and thus VET within its cultural context then it may be of value to access that corpus of knowledge and theory in the field of cultural studies.

Culture and VET

Cultural studies is itself rooted in other disciplines – like VET it is a synthetic discipline. It draws on semiotics, Saussurian linguistics, structuralism, super-structuralism and Fregian semantics and, peripherally to Althusserian Marxist theory and hermeneutics. This paper takes only 3 or 4 key concepts drawn from the field of Cultural Studies and applies those concepts to comparing the roles and education of VET professionals in Europe. The list is not by any means exhaustive, nor is it integrated. The intention is not to produce a coherent new theory or perspective for comparative VET, nor to produce a rigorous comparison of the role and education of VET professionals. Instead it is intended to select almost random elements from cultural theory and use them as examples to illustrate how the cultural issues in the role and education of VET professionals could be interpreted. If this is credible, it is possible that this could be a new area of work, a gateway to new ideas and could provide access to an alternative set of meanings.

Denotation and connotation

The name of an object will simultaneously perform two functions. It will denote or name the object whilst also imbuing it with cultural and contextual meaning – which we call the connotative function.

For example consider in English the words job, occupation, profession, career, vocation, trade, craft. The denotation of each word is very similar, 'what you do for a living', but the connotations are very different. Each word has a set of connotations and each set is different. The connotations carry cultural messages about class, status, context, knowledge base, lifestyle and so on. Similarly in French the words métier, carrière, travail, poste, occupation, profession, vocation roughly denote 'what you do for a living' but again the connotative meanings are very different and are also very different from the nearest English equivalent translation.

Two hypotheses follow from this example. The first is that 'literal' translation from one language to another operates mainly at a denotative level and comparison at that denotative level will reveal some cultural differences. However translation and thus comparison at a connotative level is virtually impossible as it depends on the unlikely event of finding a word in both languages which both denotes the same thing and has the same paradigm of cultural meanings.

So it is with VET. The use of the linguistic example above is both an analogy for the broader issues of VET but also a literal example of how the language of VET can shape its meaning.

All VET systems and structures will denote a form of cultural activity for which there are usually parallel activities in different cultures. This is at the level at which point to point comparative research works best. There are 'unemployment figures' in all countries, there is 'vocational training for carpenters' in all countries, there are 'curricula for training VET professionals' in all countries – all of these at a denotative level can be compared. However the set of cultural meanings - the cultural connotations - of these activities will have no one-to-one correspondence. What 'unemployment' means or what 'carpenter' means or what 'VET professional' means or connotes will be specific to a culture and a product of it and thus cannot be easily made equivalent.

A second hypothesis is that the meaning of any word can only be defined in terms of what is not. That is, we understand the cultural meaning and significance of 'job' as opposed to 'profession' precisely because one exists in opposition to the other. The connotations of 'job' are different to the connotations of 'profession' and it is the relationship between them that imbue both with meaning. Again if the analogy is broadened then it is not the paradigms of VET which define and explain it and give it meaning but the syntagmatic relationships between these paradigms – the articulation which exists between systems and structures. For example we understand the concept of off-the-job training in Britain partly because we define it in opposition to on-the-job training. The nature of that relationship and its cultural significance is totally different from the syntactical relationship between the elements of the German dual system. Thus, it follows that we cannot and should not compare British 'off-the-job' training with German 'schools' because each can only be defined in terms of their relationship with other elements of their respective VET systems and the cultural meaning of that relationship.

Interestingly, the French have chosen not to define the elements at all but the relationship itself in their concept of 'alternance', that is, they label the syntagm and not the paradigm.

At one point, some members of the EUROPROF partnership attempted to develop a glossary for VET. The venture floundered as they found that whilst participant researchers were able to discover the denotative meanings (often through intensive dictionary work) the connotative meaning, the lack of understanding of which had promoted the exercise in the first place, remained as elusive as ever.

Is this important? If our perceptions and ideas about VET are shaped by our culture of which language is a part, then not only is the issue of language important in itself but the analysis of denotation and connotation may offer a valuable tool for exploring comparisons within and between different VET systems.

EUROPROF has from the outset faced problems of definition and meaning. The very title "VET professionals" was chosen to try to find a 'neutral' term that would not prejudice the project through different connotative meanings in different countries. However in carrying out the project, partners have, of course, been forced to adopt terminology in common cultural usage in their own countries. In denotative terms this is not so difficult – most countries have a term which means something like VET teacher or VET trainer (interestingly the term VET planner caused many more problems at a denotative level).

However connotative meanings vary greatly. For example, a comparison of the connotative meanings for a VET teacher (Berufspädagogik) and a craft company based trainer (Meister) in Germany and a comparison of the meanings of a VET carpentry teacher in Germany compared with the UK - illustrate the problems clearly because direct comparisons based on structure, power or ideal type would still not capture the subtleties of class, status, history, tradition and lifestyle which are fundamental to each. It is these differences which contribute to the problems of the EUROPROF project team in analysing their survey material in comparative terms.

Metaphor and metonymy

A metaphor is used (in the context of cultural studies) as substitute for that which it signifies and where the relationship of the signifier (the metaphor) to the signified (the referent) is arbitrary or abstracted or purely symbolic. A metonym, however, is a substitute in which part of the meaning of the signified is transferred to the signifier, that is, the relationship is concrete and transparent.[119]

How does this help us to look at the complexity of different relationships between the VET systems and the work culture of which they are part and necessarily to understand the contradictions of these relationships?

The UK has introduced a series of work-related vocational qualifications, NVQ's, based on statements of competence and performance criteria (for more discussion on the problems of these terms see below). The desire for authenticity in learning has encouraged the introduction of simulated work environment, usually in a school but sometimes also in the workplace. For example, schools have developed model hairdressing salons to provide "as if….." experience of work. Conversely, on-the-job-training includes "assignments" which form part of the underpinning knowledge. NVQ's are centrally controlled and assessed and the lack of a written curriculum allows the integration of learning between workplace and school. This provides for the advantages of synergy, cohesion and transparency but creates the disadvantages of overlap and lack of development of a broad knowledge base. In Germany, the Dual System allows the schools to provide students with a broad theoretical knowledge base and abstracted elements of work skills with a curriculum set by the education ministries. A separate set of training regulations, developed by the BIBB, and administered by the Chambers of Trade provide the basis for work based learning in factories and craft trade enterprises.

It could be argued, albeit simplistically, that the cultural relationship between the schools and the workplace in the UK is metonymic whereas in Germany it is metaphoric. However, there are further complexities because at a higher level of signification, the UK VET system becomes itself a metonym of the dominant ideology whereas in Germany the Dual System indeed plays a dual role with VET in schools representing a metaphor for German culture and work place training providing a metonym for existing ideology.

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[119] An example would be that 'The Big Apple' is a metaphor for New York as there is a purely arbitrary relationship between the signifier (The Big Apple) and the signified (the city of New York) whereas 'The Smoke' is a metonym for London because 'smoke' (the signifier) takes one of the features of the referent or signified and uses it to represent the whole.

This analysis throws into relief the problems besetting both countries' systems: in the UK, low level training for immediate work competence and limited knowledge bases and in Germany lack of cohesion between work- and school-based elements in the Dual System.

It also begins to throw some light on the roles, and thus the education, of VET professionals in the two countries, which inevitably reflects the cultural roles of the VET systems themselves. Both UK further education teachers and German work place trainers receive their education largely on-the-job and through relatively short, part-time education programmes. For both, the primary emphasis is on previous industrial and craft practice. However German school based VET teachers are educated to MA degree level in University and receive corresponding status and remuneration.

Codes and Communities of Practice

In semiotics a code is defined as a vertical set of signs (paradigms) which may be combined according to certain horizontal rules (syntagms). The VET system itself is a code and the paradigms and syntagms which make up the code are agreed by members of the culture for which that code acts as a form of communication through communities of practice. Such codes and communities of practice are culturally specific. Codes are dynamic systems continually evolving to meet the changing needs of their users. In any dynamic or evolving code there is a constant tension between tradition and innovation or between convention and originality.

However it is this dynamic aspect of the code that enables it to cope with the new demands of an individual practitioner or researcher or those of a changing cultural situation (e.g. a new economic situation). Thus VET teachers and trainers form their own communities of practice, each with their own codes of practice which are constantly evolving in response to new cultural situations. Each sub community of practice will also assess, define and use such codes differently. Interestingly, sub communities of practice in, for example, the engineering sectors in Germany and in the UK, may have more similarity in the way they access and define codes than an engineering teacher and a business studies teacher in the UK.

The function of any code is to communicate and to convey meaning and the way in which it does this is determined to a large extent by the conventions of the culture or sub-culture using that code.It is by means of these conventions that a culture establishes and maintains its whole identity; conventions act as cohesive in all codes. Given that VET is a relatively new discipline seeking to establish its identity, it is not surprising, therefore, that there has been a proliferation of codes within VET and its sub-cultures. This has been facilitated by the relatively small number of VET professionals needing to share these codes and by the ease of transmission using electronic media. It is also true that the 'newness' of VET has permitted the introduction of 'novel' conventions (albeit this is an apparent contradiction) determined by its practitioners.

However, although codes exist within and across VET and these codes may be converging, VET systems are themselves codes and as such are agents of transmission of the often divergent, dominant cultures of which they are part. These codes are incorporated into the modes of perception and cognition of each individual to such an extent that we are largely unconscious of their operation. These interpretations are not an invented mechanism but a learned on stroke a day manifestation of our whole personal and collective history of socialisation in a cultural environment and interaction with the VET systems within it.

The hegemonic process by which the dominant ideology reproduces itself, therefore, determines, and is in part determined by the national VET systems.

In practice this means, for example, students learn not just the content of that which is being taught but are also learning 'about' VET which is a precondition for making sense of its content. If VET professionals are facilitators in this process, how then can the role of VET professional from different cultures ever be compared unless in the context of cultural awareness?

Orders of Signification: Myth and Mythology

The word *carpenter* (in English), *Tischler* (in German) or *charpentier* (in French) are more or less equivalent and represent or signify a person who works with wood. Semioticians call this the first level of signification. However these words carry cultural meanings as well as merely representative ones. These meanings derive from the way society uses and values both the signifier (the word) and the signified (the person who works with wood).

For example, in the UK culture *a carpenter* frequently signifies 'artisan', 'manual worker', 'craftsman', 'practically skilled', 'time served' but also `lower class', `masculine', `non-academic', `hourly paid'. This is known as the second level of signification and the totality of this cultural meaning of *a carpenter* combines to form a cultural myth. The myth is validated from two directions; first from the specificity and accuracy of the first order sign but secondly, and more importantly, from the extent to which the second order sign meets our cultural needs. These needs require the myth to relate accurately to the reality out-there but also to bring that out-there reality in line with appropriate cultural values.

With *carpenters / tischlers/ charpentiers* it is conceivable that the cultural myths are established and may be similar but if *VET professional* is substituted for *carpenter* the situation is further complicated by the fact that the myths are not only likely to be very different but that the myths are at different stages of evolution reflecting the differences in stages of the professionalisation of VET in different countries. Whilst VET professionals are themselves struggling to build their 'myth' and relate it to their out-there reality (that is, the converging VET paradigms) so cultural needs are requiring the same myths to bring the out-there reality in line with the myths which are often based on divergent, cultural values.

Although responses to words and other signs are subjective and occur in the individual they are not, paradoxically, individualistic in nature but derive their meaning only through agreement between members of the culture and responses which are shared, to a degree, by all members of it. This is the ill defined area of inter-subjectivity.Intersubjectivity is culturally determined as one of the ways in which cultural influences affect the individuals in that culture and through which cultural membership is expressed. Inter-subjectivity also operates sub-culturally and will determine the way carpenters 'see' carpenters and 'see' the training of carpenters as opposed to how VET professionals 'see' carpenters and 'see' their vocational training or, indeed, 'see' their own training as VET professionals.

VET is not simply about students learning to be carpenters or learning to be VET professionals; it is also about learning what it means to be a carpenter or VET professional. There is an intrinsic paradox for VET professionals, therefore, in being charged with helping students learn what it means to be, for example, a carpenter without necessarily knowing what it means to be a carpenter themselves.

The myths which operate as organising structures within this area of cultural inter-subjectivity cannot themselves be discrete and unorganised for that would negate their prime function (which is to organise meaning); they are themselves organised in a coherence known as a mythology or an ideology. This is the third area of signification which is a reflection of the broad principles by which a culture organises and interprets the reality with which it has to cope.

It is at this order that '*a carpenter*' can form part of an imagery and ideology of a society based on 'class distinction', 'a subservient workforce', 'honest toil', 'hard graft', 'an honest days work for an honest days pay', the 'Protestant work ethic' and so on. Whilst the myth of the carpenter may be capable of comparison across cultures, the location of that myth in the cultural mythology of Germany or Britain cannot ever be compared with that of other countries nor can it ever be understood by an observer who does not share the inter-subjectivity of that dominant culture.

So it is with the training of carpenters or VET professionals. We can describe the similarities and differences, we can conceptualise it by mediating it through our own set of cultural meanings but we can never 'know' it or 'understand' it in the way that it is 'known' by members of a culture or subculture of which we are not part.

To summarise, therefore, given that the reading of the sign within the culture will differ, it follows that the collection of signs that represent the totality of the system will differ. Thus the way that this collectively of signs creates its own myth, which contribute to but also being part of different cultural mythologies, will also differ. Maybe, then, VET research is no more or no less than a self constructed myth looking for a place in a cultural mythology

Lest this sound unduly cynical, the final section of this paper attempts to suggest a constructive way forward for integrating cultural studies into the rich diversity of disciplines which together inform and shape VET research.

The Way Forward

Firstly, there is a case for conducting an audit of that discipline we call cultural studies, looking systematically at its various branches and central theories and testing them for relevance against the VET research agenda. In particular we need to map carefully the interfaces with other disciplines which contribute to VET research such as economics, psychology, sociology, labour market theory and so on. Secondly, we need to identify a broader range of analytical tools drawn from cultural theory and use them to analyse and illuminate key research questions rather than taking fragmented examples that have an `easy fit'. We need to ensure that they are robust and valid and add real value to our understanding rather than simply being plausible. Thirdly, we need to take those tools which are found to be useful and track them back to their theoretical origins. From this we need to attempt to integrate them into a coherent framework for the cultural analysis of VET. Finally, we need to use the outcomes of cultural analyses to generate new VET research questions and help shape the research agenda.

Appendix 1

The Eight Cornerstones of the EUROPROF Project

1. The project is based on the idea of anthropocentric production - on the idea that workers should be given the skills and the autonomy to shape and control technology in the production process and to design and control work organisations. These skills are called shaping skills. One of the key roles for the new VET and HRD professional is to facilitate the development of these skills.

2. The project aims at developing social innovation. Innovation is seen as being based on the skills of the workforce, on work process knowledge and on new forms of work organisation. The introduction of new technology will not in itself lead to innovation or increased competitiveness. Instead innovation will be

based on the application of theory and the utilisation of skills, work process knowledge in the work process.

3. The project is based on ideas of social inclusion - that everyone has the right to education and opportunities for learning vocational skills and that the application of skills for social innovation is central to generating employment opportunities and reducing unemployment. The project develops the idea of a learning region to foster social innovation and to integrate VET programmes for the unemployed within the community.

4. Since VET is seen to play such a central role in the promotion of social innovation, it is important that VET becomes recognised as a discipline in itself. A main aim of the project is to foster, by mutual learning within the context of Europe, an innovative research culture in vocational education and training.

5. The project aims to 'professionalise' VET professionals - in other words to raise the status and skills of the occupation. Therefore, we believe that we need to develop university based education programmes. The initial aim of the project is to develop an MA programme in a number of European countries based on common principles and concepts.

6. The project is based on the recognition that the activities outlined above represent a new role for VET and HRD professionals. Accordingly, the project seeks to develop a new occupational profile for VET and HRD professionals. That profile will necessarily be multi-faceted based on the breakdown of the traditional divide between vocational teachers and Human Resource Development professionals and the integration of initial and continuing education and organisational learning within the concept of life long learning.

7. The project stresses the importance of work related process knowledge and the application of knowledge and skill in promoting sustainable innovation. The improvement of competitiveness and social welfare in Europe depend on the use of the whole of the human potential of its citizens. For this reason it is vital that the VET and HRD professionals themselves possess occupational and technical skills and work related process knowledge. The project aims at a new curricu-

lum for VET and HRD professionals which combines pedagogy with technical and vocational knowledge and work based skills.

8. The project methodologies are based on the concept of collaborative research. Traditionally European projects have tended towards a comparative approach. The project will seek to identify common research questions leading to transnational development tasks. The project adopts an action research approach and addresses both research questions and development tasks.

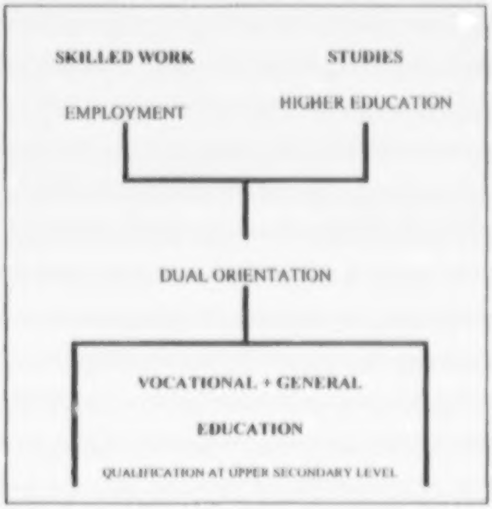
2. Comparative Approaches in a Transnational Collaborative Study - Evidence from the LEONARDO Research Project INTEQUAL

Sabine Manning[120]

Introduction

This contribution arises out of a LEONARDO research project (1) co-ordinated by WIFO, Berlin, and involving partners from seven European countries (2). The project focuses on specific schemes of qualification which have a dual orientation towards employment and higher education (3).

QUALIFICATION WITH A DUAL ORIENTATION



The resulting qualification opens up alternative routes into skilled work and advanced studies. While "double qualification / Doppelqualifikation" is a common term for this in a number of countries, including Austria, Germany and the Netherlands, the term "integrated qualification" was used in the proposal for this project because of its emphasis on the qualitative aspect of integrating general and vocational education. In the course of joint discussion in the partnership, however, a new term was created: "qualification with a dual orientation towards employment and higher education", with the abbreviated form DUAL QUALIFICATION (not to be confused with the "dual" system of vocational education and training in Germany!). This term concentrates attention on the function rather than on the structure of the qualification. The issue of integration is in itself of course central to the analysis.

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The comparative investigation includes schemes of different dimension within the education system. Three groups may be distinguished:

- Schemes which extend over an integral part of the whole educational sector such as the vocational programmes or streams within the comprehensive school systems of Norway and Sweden;
- Schemes which refer to individual courses or qualifications, e.g. the Vocational Baccalauréat (Bac Pro) in France, the General National Vocational Qualification (GNVQ) in England, the long courses of senior secondary vocational education (MBO) in the Netherlands and the WIFI Academy courses in Austria;
- Schemes representing pilot projects within the established systems of vocational education and training (Germany: Bavaria and Brandenburg).

A methodological issue addressed in this paper is how to link comparison (of the schemes) with collaboration (of the partners) in order to achieve a new quality of transnational analysis. Three stages of this approach can be identified: a comparative analysis of the schemes, a collaborative investigation of selected topics and conclusions focusing on mutual learning.

Comparative analysis of the schemes

At the first stage, a comparative analysis of the schemes of dual qualification is carried out. This is based on the evidence of national case studies prepared by the partners according to a common pattern of analysis. In order to establish the extent of integration of general and vocational education, two dimensions are distinguished: the relationship of education and training to skilled work, and the relationship of general education to vocational training. Indicators are applied to determine the character of these relationships and to select the data from the national schemes. The resulting comparative matrix promotes the assumption that experience of individual schemes may be transferred across different education systems.

A key question which has run through this investigation is the extent vocational and general education are integrated. This includes the issue of competence acquired in these schemes.

The comparative analysis starts out from two dimensions which are assumed to be relevant for the qualifications with dual orientation:

- the relationship of education and training to skilled work and
- the relationship of general education to vocational training.

In conclusion, the schemes are compared in relation to both dimensions.

Dimension I: Relationship of education and training to skilled work

The schemes under investigation are nearly all of the same origin: they have their roots in vocational education and training. Only the GNVQ, although part of the vocational qualification structure, was designed from the outset as a middle way between vocational and academic routes in upper secondary education. The others, which share the vocational background, have been shaped or developed to include a fair degree of general education and transferable skills in order to reach a high level of vocational competence as well as study skills.

In consequence, the relationship to skilled work is an essential dimension of all the schemes. "Skilled work" of course stands for different concepts in the various countries concerned. On the one hand, vocational education and training may prepare for employment involving several skill levels, this being particularly the case with entry-level qualifications (schemes in England and Sweden). An alternative approach is for the qualification aimed at to be related to a clearly defined trade and/or skill level, this applying above all to schemes within dual systems of vocation education and training (Austria, Germany).

Despite these differences, however, there are comparable means of relating the courses to the requirements of work. In order to determine the extent and character of this relationship, two indicators are applied:

- the degree of vocational specialisation measured by the number of primary and secondary divisions (areas, programmes, branches etc);
- the part played by practical training as it is characterised by the organisational form (assignment, traineeship and employment) and by the duration within the course.

The analysis according to the two indicators produces different groups of schemes which range from a weak to a strong relationship of education and training to skilled work. These are the characteristics of the groups (with the schemes in brackets):

1 Prevocational training in broad areas; no compulsory practical assignment (England);

2 Training in differentiated vocational areas; practical assignments (Sweden);

3 Basic vocational training and full specialisation; extensive practical assignments or traineeship (France, the Netherlands, Norway, Germany);

4 Broad continuing training based on initial specialisation; employment (Austria).

Dimension II: Relationship of general education to vocational training

The curricula of the schemes provide for a variety of combinations involving vocational and general education. In the following comparative analysis, four stages have been identified, ranging from the additive to the integrative type of approach:

A) separate general/theoretical subjects within the major curriculum and also as optional units;

B) vocational application of general/theoretical subjects or combination of theoretical and vocational subjects;

C) education and training related to transferable skills, going beyond the division of general and vocational abilities;

D) action-orientated education and training based on work-related parts of the curriculum (projects).

This second dimension is relevant not only for advanced studies, but also for high-level skilled work. In fact, it is orientated towards a permanent process of adapting to rising demands in qualification. This complex requirement on the part of the work process is the key to understanding attempts in these schemes to link vocational and general/academic components of education and training.

The two dimensions in connection

The analysis of schemes according to the two dimensions has led to different grouping and ranking. In order to establish their interrelation, both dimensions are combined in a matrix with the schemes arranged accordingly.

THE SCHEMES IN TWO DIMENSIONS

	Dimension II			
	Additive	⇒	**Integrative**	
	A	B	C	D
Dimension I **Weak** ⇓ **Strong**				
1	**X**	**GNVQ: advanced level (England)**	**X**	**X**
2	**Vocational programmes (Sweden)**			**X**
3	**Bac Pro (France)**			**X**
	MBO: long courses (Netherlands)	**X**		**X**
	Vocational streams (Norway)	**X**	**X**	**X**
	X	**Pilot project (Germany: Bavaria)**	**X**	**Pilot project (Germany: Brandenburg)**
4	**WIFI Academies (Austria)**			**X**

Dimension I	The relationship of education and training to skilled work
Dimension II	The relationship of general education to vocational training
A - D	Categories related to the degree of integration between general and voc. educ.
1 - 4	Grouping related to the degree of vocational specialisation and practical training
Scheme	Indicates the focus of the scheme within this matrix
X	Indicates additional features of the scheme related to this matrix

What can we conclude from this final comparison?

- There is, altogether, an emphasis on the additive combination of vocational and general education, with the latter being extended particularly in individual options (A). Three schemes focus on this (Sweden, The Netherlands, Norway), and most of the others include it as a vital part. The relevance of the additive combination seems to be fairly independent of the scheme's relationship to skilled work (all groups are included).
- Next to this, the vocational application of general subjects as the first stage of integration (B) is relevant, both as a focus (England, Germany: Bavaria) and in combination with neighbouring categories: A (France) and A/C (Austria). As with theoretical subjects (A), the relevance of applied subjects (B) can be observed in schemes ranging from weak to strong relations to skilled work (group 1, 3 and 4).
- The advanced stages of integration - training related to transferable skills (C) and action-orientated education and training (D) - are characteristic of two schemes (Austria, Germany:Brandenburg) which have, at the same time, the strongest relation to skilled work. These schemes display the potential of work-based education and training for the development of transferable skills, including study skills. Advanced forms of integration, particularly project work, are also represented as components of all the other schemes.

The evidence suggests that several forms of combining general and vocational (A to D) education are fairly independent of or easily adaptable to different categories of courses. If this proves to be the case, it means there is considerable opportunity for exchange and transfer of experience across schemes and national systems.

It is also apparent that the schemes of dual orientation, in this specific function and in their national context, apply or indeed create innovative course structures, curricula and didactic approaches which are of wider significance for qualitative advance in vocational education and training.

These hypothetical conclusions are taken up again in the third step, following the detailed analysis of selected topics below.

collaborative investigation of selected topics

At the second stage, topics are selected for carrying out detailed collaborative investigations of the schemes across groups of countries. They centre on integrative learning processes,synoptic assessment, skills for higher education and patterns of career development. Each investigation draws on evidence both of empirical research available from the countries concerned and of joint analysis within the topic team (4). This process of collaboration is interlinked with continuing transnational comparison at an operative level, leading to a detailed comparative assessment of outcomes.

Integrative learning processes

Schemes investigated: Germany/Brandenburg, Norway, Sweden

This study focuses on the conditions and methods which promote integrated learning processes generating dual qualifications. At the classroom or workshop level the partners look into how teachers organise the learning conditions, both between and within subjects. One important learning approach expected to generate integrated competencies centres on task-, problem- and project-based methods. Research methods applied include observation, interviews, questionnaires and matching different models of organisation and tuition. The topic study produces comparative evidence which is related to four research questions:

- What is understood by 'parity of esteem' and 'integrated learning processes'?
- What organizational or curricular frames facilitate or obstruct integrated learning processes?
- What methods and evaluation modes promote integrated learning processes?
- What reflections and suggestions can be made regarding national policy-making and international networking and cooperation?

synoptic assessment

Scheme investigated: England

Synoptic assessment is devoted to testing candidates' accumulated understanding of a subject (the vocational area) as a whole. This study is related mainly to GNVQ in England, although experience and views from the other countries are also offered for discussion. Starting out from a review of a series of small-scale investigations, possible approaches to performance assessment are discussed in the context of curricular structures, cognitive developments and learning strategies. The issue is of active policy interest, since the intention is to introduce an element of synoptic assessment into GNVQ in the future.

skills for higher education

Schemes investigated: England, the Netherlands

This investigation looks at issues around the progression to higher education of students from senior vocational education (mbo) in the Netherlands and Advanced General National Vocational Qualifications (GNVQ) programmes in England. The researchers draw their findings from their own investigations together with secondary analysis of research on the knowledge, skills and personal qualities required for success in higher education. The concern is how to increase prospects of progression to higher education while also maintaining an orientation towards the labour market as a fundamental aspect of a qualification with a dual orientation. The concluding comparison results in challenges for the schemes in both countries.

patterns of career development

Schemes investigated: Austria, France, Germany/Bavaria

This topic team intends to determine to what extent dual qualifications influence the ultimate vocational career paths taken by graduates. One focal point is to assess the proportion of graduates entering industry-related jobs as against those choosing to pursue university studies. The evaluation draws on results stemming from research data compiled in the states in question, including Individual personal data and evaluations following completion of dual-qualifying education, and data on the educational measures involved.

There are substantial differences between the schemes with regard to the character of the courses, the scale of participation and the original data bases used for the investigation. For this reason, the data compiled according to common criteria are evaluated for each scheme individually in the national context.

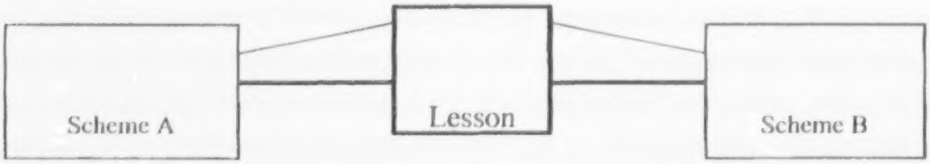
conclusions focusing on mutual learning

At the third stage, all partners involved in the project set out conclusions relevant for their specific national context. These conclusions covering the whole project are guided by the question: "What can we learn from one another?". The "lessons" are jointly discussed and compiled in a structured comparative survey. The scale of mutual learning reflected in this survey serves to back up the earlier assumption that experience can be transferred across systems.

Following the guiding question (what lessons can we learn form the schemes?) the focus is on the lessons rather than the schemes themselves. The aim is to identify stimulating lessons, including best practice, and not to evaluate the schemes.

The lessons in general are related to specific schemes, that is a lesson is normally drawn from a given scheme A in order to feed into one's own scheme B. In this process, the lesson is determined by aspects of both scheme A (for example, good example) and scheme B (for example, problem requiring a solution). This interrelation is of course further influenced by factors such as the perception and experience of the partner drawing the lesson.

LEARNING FROM SCHEMES



The individual lessons have been grouped according to three major aspects:

- the DESIGN of the schemes, with regard to the curriculum, the learning process, practical training and the course structure;
- the IMPACT of the scheme, particularly on the students' passways and careers;
- the CONTEXT of the educational system and policy.

The following tentative conclusions may be drawn from the empirical evidence (about 30 lessons):

(1)

The lessons clearly cover a broad ground, including the design, the impact and the context of the schemes. While this is of course a reflection of the general approach to the analysis in the whole project, it also confirms the complex character of dual qualifications.

Within the three groups, a major proportion of the lessons (often with similar content in detail) focus on aspects of the design, ie the curriculum and the learning process. This again is probably connected with the approach in this project which has concentrated in the second part on topics such as skills and the learning process. At the same time, the importance of the curricular and didactic design of the schemes is clearly underlined.

(2)

A key question for assessing the nature of the lessons is the extent to which they depict specific characteristics of dual qualifications. These characteristics include, above all, the interrelation of general and vocational education and the dual orientation towards employment and higher education.

In the group related to the design of the schemes, lessons specific to the dual orientation are at least quantitatively in a minority. This may at first sight be surprising, since the guiding question referring to the schemes obviously implies their characteristics.

Instead, the majority of lessons drawn on the curriculum, the learning process and structure of courses could be characteristic of any high standard education, in particular vocational education. Typical examples of these lessons are the acquisition of key qualifications, the provision of core subjects and the development of independent learning skills.

This result is most important in two respect. It shows the relevance of basic qualities of learning for the success of dual qualifications. At the same time, it suggests that schemes of dual qualification are able to have a broader significance for the transfer of good practice within vocational and general education.

In contrast to the first group (related to design), lessons connected with the impact of the schemes are highly specific to the dual orientation. A major criterion of success reflected in several lessons is the equal balance between academic and vocational careers.

The lessons drawn on the context of dual qualifications also focus on the specific characteristics of the schemes. They reveal the variety of factors determining the success of dual qualifications, including the management of reform, the training of teachers and the links to other educational pathways.

At the same time, the potential of dual qualifications for setting conditions to other components of the education system is recognised. A well established scheme, such as the MBO, is strong enough to compete with other pathways. Furthermore, the higher education curriculum may change its orientation in response to the requirements of the scheme.

(3)

The survey shows that various lessons are drawn across schemes of widely differing character (eg the Swedish core subjects as a lesson for German pilot projects, the Norwegian system of financial aid to the firms as a lesson for the French scheme, or the extended pathways to higher education for skilled workers in Austria as a lesson for England).

Altogether, lessons drawn from each "provider" scheme extend over the majority of "recipient" schemes. This broad spectrum of lessons is particularly revealing if related to the hypothetical conclusions arrived at in the first stage of this project (see above):

Indeed there is considerable opportunity for the exchange and transfer of experience across schemes and national systems. It is also apparent that the schemes of dual qualification apply to and indeed create both innovative course structures or curricula and the varying didactic approaches, all of which are of significance for the qualitative advance of vocational education and training.

The results of this collaborative comparison are intended to provide a stimulus for further discussion with specific target groups (policy makers, researchers and practitioners) and for carrying out pilot projects between partner countries.

Bibliography

The project INTEQUAL (1995-1997) has been carried out with the financial support of the European Commission in the framework of the LEONARDO DA VINCI programme.

Participants in this partnership include Göran Årman, Tor Bergli, Rainer Bremer, Alan Brown, Henri Eckert, Egil FrØyland, Robert Höghielm, Edith Jonke-Hauptmann, Gerald Heidegger, Jean-Louis Kirsch, Werner Kusch, Lillian Larsen, Owe Liljefelt, Sabine Manning, Trudy Moerkamp, Monika Thum-Kraft, Eva Voncken.

The results of this project have been published in two research reports and a major study:

Manning, Sabine (ed.). *Qualifications with a dual orientation towards employment and higher education: a comparative investigation of innovative schemes in seven European countries. INTEQUAL Report I.* Berlin: Wissenschaftsforum Bildung und Gesellschaft e.V. (WIFO). Manning, Sabine (Ed.): *Qualifications with a dual orientation towards employment and higher education: a collaborative investigation of selected issues in seven European countries. INTEQUAL Report II.* Berlin: Wissenschaftsforum Bildung und Gesellschaft e.V. (WIFO). November 1997;

Brown, Alan and Manning, Sabine (eds.). *Qualifications for employment and higher education: a collaborative investigation across Europe.* Hämeenlinna: University of Tampere 1998 (Ammattikasvatussarja; 18).

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Integrated learning processes: Goran Årman, Tor Bergli, Rainer Bremer, Egil Frøyland, Gerald Heidegger, Robert Höghielm, Lillian Larsen and Owe Liljefelt

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Skills for higher education: Alan Brown, Trudy Moerkamp and Eva Voncken

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3 Additional qualifications at the interface between initial and continuing education/training, a comparative survey (AQUI)

Georg Hanf[121]

This presentation was given at a rather early stage of the project. Therefore the following cannot provide much more than the outline of the problem to be addressed, the research objectives, the research questions, the methodology. Special attention is given to the issue as how to transpone a national problem onto a European level, how to find the functional equivalences within the different systems and then look for approaches, models, solutions; finally whether and how these can be transferred.

The study is performed by the Federal Institute for Vocational Training (BIBB, Berlin) in co-operation with research institutes in France, Denmark, Austria, the United Kingdom and Greece. It has been started as a national project including expertise from France and Denmark; it was then linked into CEDEFOP's network on trends in occupations and qualifications (CIRETOQ group B) *and was extended to include Austria and UK as well.* .

1. *Outline of the problem*

The study wants to observe recent developments in a number of Member States concerning new developments in the training provision at the interface between initial and continuing training. There seem to be a number of challenges in line with changing work organisation and career patterns.

Formal initial training on a broad basis is getting more and more a prerequisite for accessing and stabilising at the labour market, however at the same time it is getting less and less sufficient for carrying out rapidly changing work tasks. National standards are often too general and are updated too slowly; they do not respond to the requirements in time. On the other hand VET is lacking attractivity for high achievers because of dead ends in occupational careers. Many countries therefore aim at making their VET systems more flexible and creating individual career related training pathways.

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There seems to develop a certain re-definition of the relation of initial and continuing education and training: initial training programmes mostly describe only minimum requirements, they are complemented by additional modules responding to special company needs and building bridges into continuing and higher education and training.

This applies, may be in different ways, for the different countries. For Germany for instance a recent study has shown: already during initial training and straight after, a high number of companies in industry and commerce (75%) enriches initial training with 'additional qualifications' (Zusatzqualifikationen) and send their employees to courses and modules of further training.

For the employers additional qualifications may help creating specialist profiles in view of a closer adaptation to individual company's needs; for employees additional qualifications may open up career possibilities on internal and external labour markets; from the governmental point of view additional qualifications may improve the attractiveness of vocational training and the responsiveness of the vocational training system to changing demands. 'Additional qualifications' are a new momentum in the development of VET systems towards more diversity of training pathways, towards more flexib:lity - and possibly more similarity of vocational education and training systems.

2. *Research objectives*

Additional qualifications are of interest from a double perspective: from the point of view of the enterprise, what counts is achieving the fastest possible reaction in terms of personal development. In the fram eof the national VET system a high level of coherence between initial and advanced training via additional qualifications increases the flexibility and mobility of the labour force. From the point of view of the individual, the important thing is the training-related career.

The project should make a contribution towards a rationalisation of the shift occurring in relation to vocational training in terms of content and time-scale, from universal education to differentiated special training and further training. The aim is to provide improved transparency regarding this process in order to make the utilisation of qualifications easier to assess for companies and employees and make career assessments easier too, to the extent that they are linked with qualifications. The starting point is the assumption that the absence of continuity between initial and advanced training is dysfunctional, as it leads to avoidable costs.

The problem of additional qualifications, which interlink initial and advanced training in general, occurs in the different industrialised countries; there is a range of system-related approaches available as solutions to it.

The aim of the comparative study is to describe and analyse national training policy concepts and the current measures being taken by enterprises in the area of training-related advanced training in selected countries. On the basis of the comparison between the countries surveyed, information about alternative solutions will be evaluated. Consideration as to the feasibility of adapting and then transferring these approaches and solutions to the national vocational training system will follow.

3. Additional qualifications - *How to find the equivalents in the VET systems of different countries?*

To carry out a comparative study the German concept of 'Zusatzqualifika-tionen' has to be contextualised for the different systems of VET. The notion of additional qualifications makes much more sense in VET systems where initial VET is highly formalised and other substantive vocational qualifications are also taken in advance of being given the opportunity to exercise the skills, knowledge and understanding in roles for which a person has been trained.

It is impossible to formulate a single and precise meaningful definition of 'additional qualifications' to apply across very different VET systems. Rather the understanding of 'additional qualifications' itself needs to be contextualised and interpreted in the light of the development and patterning of particular VET cultures, policies and practices.

Full range of skills, knowledge, understanding, personal attributes, attitudes and so on required to perform effectively as an 'experienced skilled worker' is far in excess of those required to complete initial training. Recognition of this draws attention to the issue of the extent to which these additional qualifications (owned by individuals) should be systematised and formally recognised within a framework of additional qualifications. This in turn could be linked with concepts of organisational and qualificational spaces.

For example, in the UK in many organisational settings there has been a tendency to leave much learning within the organisational space, and outside the remit of the qualificational space. Since the NVQ system hat been established much skill specification has moved from the organisational to the qualificational space, at least in theory. In practice, the very low take-up of NVQs in many areas, the almost complete collapse of firm-based initial training has meant that the organisational space has, de facto, increased significantly in many industrial sectors. Although, on the other hand, the increasing participation in post-compulsory education has meant that the specification of skills in (pre)vocational education and vocational higher education has lead to an expansion of qualificational space from a different direction.

Furthermore 'additional qualifications' cannot be directly compared according to level (for example, between levels 3 and 4), but rather it is an empirical question as to what extent the content of an additional qualification (in the qualificational space) in one country is or is not within the qualificational space of another country, and this is in turn influenced by the overall topography of qualificational space in that country. This means that additional qualifications may need to be related to vocational education and training qualifications more generally, rather than being specifically linked to initial training, more narrowly defined. Indeed additional qualifications could be one means of lessening the distance between learning in the 'organisational space' which is formally not accredited and the major programmes in the centre of the 'qualificational space'. Therefore, it may be more appropriate to consider 'additional qualifications' in the 'interspace' between qualificational and organisational space, rather than at the interface of initial and continuing education and training.

Different patterns of organisational and qualificational space

The use of the concepts of organisational and qualificational spaces can … highlight the very different patterns of these spaces in different occupational sectors *applicable* in practice. This means that 'additional qualifications' in any single sector need to be situated in the particular context of that sector: for example, in relation to the degree of standardisation of training provision; the extent to which skills are learned on the job; how education and training provision is stratified; the nature of progression pathways; labour market value and recognition of different qualifications; whether experience is valued more highly than formal qualifications; balance between different types of learning; and so on.

Thus, for example, the three sectors being compared in this project make very different use of qualificational space for 'additional qualifications'. In the health sector there are examples of formal additional qualifications, though even here learning gained in the 'organisational space' will often be of considerable significance. In the retail sector the same formal qualifications may be taken either during initial training or as part of continuing education and training provision, although most learning occurs in the 'organisational space' rather than being formally accredited. In the print sector, after initial training there is little formalised accredited training and there are very few instances of individuals taking 'additional qualifications'.

Functions of additional qualifications for companies

Two different functions of additional qualifications may be distinguished dependent on whether the concept is being addressed at new job entrants or at existing employees. If new recruits were joining a company with the intention of working at intermediate skill levels, either immediately or within a relatively short period, then the company may wish that they upgrade their technical skills, whether … through on-the-job learning, more formal learning while working or by some form of off-the-job training. If such learning resulted in a formal recognition of additional qualifications, this could be regarded as a signal that the employee was ready to perform fairly close to or at experienced skilled worker level.

On the other hand, if the company was seeking to develop additional qualifications for existing employees in an organised way, this was likely to be regarded as an attempt to implement an upskilling strategy, associated with more effective use of human resources. This could be a response to technological and organisational change, and/or, as part of an attempt to raise the quality of products or processes, an attempt to secure competitive advantage.

Functions of additional qualifications for individuals

For individuals, additional qualifications can perform four functions. First, they can attest that a worker has reached a level where he or she can perform effectively in an existing role. Second, they can highlight that a worker has attained some specialist qualifications useful for a current or prospective work role. Third, they can be used to confer an advantage within an internal labour market. Fourth, they can have a general labour market utility.

Functions of additional qualifications for the VET system

Additional qualifications could be envisaged as playing a number of functions for the VET system as a whole. First, they could be viewed as part of a strategy to upgrade or extend technical education and training. Second, they could be considered as contributing to the development of a more comprehensive and transparent system of qualifications. Third, they could be a means of encouraging enterprises to engage in skill enhancement strategies for their workforce, through offering the companies the opportunity to formally recognise achievements on (organised) programmes of learning. Fourth, they could facilitate the transferability of skills (and individuals) within or outside the enterprise. Finally, they could offer the opportunity for individuals to construct more differentiated career pathways, 'tailored' to their own individual requirements.

4. *Selection of countries sectors, criteria for identifying 'A.Q.s'*

The combination of the different countries involved (A, DK, F, GR, UK and D) provides a wide variety of qualificational and organisational spaces.

The same goes for the three sectors chosen *for illustration*, each of them showing different structures and relations of the qualificational and the organisational space: the Retail Trade as *an occupational* sector with relatively high internal recruitment via company training; Health as *an employment* growth area in the course of restructuring and with a relatively high level of external (scholastic) recruitment; and the Print/media (pre-press) as a traditional sector *marked by* radical technological changes (ICT).

We agreed on a set of definition criteria to find the equivalencies within the different systems:

Functional criteria (analytical transparency)

- 'Locks' for innovation, through which new contents or courses are 'lifted' into the standardised regular education/training provision;
- bridges between different occupational areas;
- profiles on top of standardised initial training according to special needs of companies or regions;
- steps for professional careers increasing occupational mobility (function) either horizontally, diagonally, or vertically within the company/on the labour market;
- ladders to further and/or higher education/training

Formal criteria (descriptive transparency)

- Skilled workers / level 3 up to level 4
- Formal training or training on the way to be formalised;
- Certified or to be certified;
- Related to particular initial training; supplementing, completing, widening etc.
- Delivery either during initial training or straight after; finished one year after initial training;
- Short term modules (equivalent at least 40 hours full time), courses up to 1 year full time;

Tentative examples

- Specialisation (tools/machines, processing techniques);
- Combination of different trades (commercial contents for technicians; technical contents for business administrators; elements from „neighbouring" occupations, hybrid qualifications);
- Transversal skills (international qualifications, project and process management, quality management, work organisation, health and safety, logistics, team and co-operation competencies, customer orientation, marketing and counseling, environment protection).

5. *Research questions*

Within the first phase the following questions shall be addressed at national experts (government, social partners), responsible bodies and training institutions in relation to the three sectors.

National situation

- What were the major changes within the last years for the development of 'A.Q.s'?
- What is the meaning of 'A.Q.s' in the respective national VET framework?
- How are they identified: By company needs, by training providers, by individuals?
- How are they accredited for in-company careers, for accessing further and/or continuing education/training, for vertical/diagonal/horizontal mobility on the labour market?
- Do 'A.Q.s' form a distinctive level within the qualification structure?

Supply and demand

- For what vocations/occupational profiles, for what target groups (with special attention to gender) are they offered?

- What contents do 'A.Q.s' have, being not part of regulated initial or continuing training?
- At what stage are 'A.Q.s' offered? During initial training, straight after or after work experience?
- How long is training for 'A.Q.s'?
- Where and how is the delivery organised? Who is providing 'A.Q.s'? What is the percentage offered by schools, training centres, companies?
- What are the costs for 'A.Q.s' and how are they financed?
- Are 'A.Q.s' certified? According to what regulation? By whom? How?
- What is the participation rate in 'A.Q.s' in relation to the whole target group?
- What is the demand for 'A.Q.s'?

Future perspectives, plans for action

- Should 'A.Q.s' be offered during initial training, straight after or after work experience?
- Should they be regulated as a part of initial or further training? Or should they be not regulated at all?
- Is there a need for more 'A.Q.s'?
- Is there a need to create completely new qualification profiles responding to 'A.Q.s'?
- What will be the impact of the development of this „intermediate area" of 'A.Q.s' on initial training and further training?

European dimension

How do 'A.Q.s' fit into a European framework of training levels (see parallel CEDEFOP survey on the European structure of training levels)?

6. *Expected outcomes*

The overall value of this study would lie particularly in the answer to the following question: How can additional qualifications be transparently represented and (how) can additional qualifications be designed as elements along the vocational training path, so that the need for flexible adaptation to the target parameters of business can be met and they can also be exploited on the labour market and on progression routes?

An intermediate report will be available in the autumn 1998 and the final report can be expected by the end of 1999.

The final outcome will be *focused at* recommendations for decision makers on:

- Transparency of qualifications
- Rational construction of 'A.Q.s' in terms of contents and organisation
- Design of lifelong VET pathways

7. *Methods considered*

First phase of the project:

1 Secondary analyses of publications and political documents produced in the selected countries in order to assess the current situation.

2 Survey of political decision-makers (State, social partners nationally and in the sectors in question) and experts in order to establish what are the relevant current trends and the problems associated with them.

Second phase:

3 Survey of personnel managers/training managers in selected enterprises (at least three per sector/per country) regarding recruitment strategies and practice in relation to "Additional qualifications".

8. *Research institutes in the Member States participating in the survey*

Besides the contractor (BIBB) who is bearing major parts of the costs of this survey itself *and is co-ordinating this survey* ... in close connection with CEDEFOP the following institutes joined this research partnership:

1 Industriewissenschaftliches Institut (IWI)/Vienna, Jörg Markowitsch jointly with Institut für Berufliche Erwachsenenbildung (IBE)/Linz, Walter Blumberger

2 Danish Vocational Teacher Training Institute (DEL), Anders Vind;

3 Institute for Technological Education (ITE)/Athens, Theo Papatheodossiou jointly with Pedagogical Institute/Athens, Stamatis Paleocrassas

4 Centre for Surveys and Research on Qualifications (CEREQ) Marseille, Anne-Marie Charraud

5 Qualifications and Curriculum Authority (QCA, former NCVQ) London, Alison Mathews

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4 The Integration of Older Employees into Teamwork- Experiences of transnational comparative application-oriented research -

Eva Kuda[122] *and Jürgen Strauß*[123]

1. Subject of the project: teamwork and older employees

IG-Metall's Leonardo project takes up a theme of growing importance for Europe as a whole: how to combine an ageing workforce with the operational requirements of modernising work organisation. Such modernisation is often aimed at making wider use of employees' professional and interdisciplinary (co-operative) skills and results in work being reorganised in various forms of teamwork.

Contrary to many expectations, the conversion of workplaces to teamwork is not a relatively short-term process with a fixed end. Such expectations are often based on a mechanistic understanding of organisations. Rather, it is a longer-term, continuous process of organisational development. If this social process is to succeed, it is important, among other things, that the respective organisational structures (e.g. the way the work is shared out and performance regulated within the group) fit in with the staff structures in the workplace (e.g. the qualifications, but also the seniority of the employees concerned); and, conversely, that the staff structures (e.g. the skills and motivation of the groups of people involved, but also the composition of the teams) should be conducive and not detrimental to the further development of the organisational structures. This interrelationship is crucially affected by the company's personnel policy, and by continuing training, process monitoring, appraisal, selection and encouragement of employee teams within the company.

The average age of the workforce is on a rising trend because of demographic change, the fact that it has become more difficult to retire early, but also as a result of certain bottlenecks affecting the push of the new generation onto the labour market. There is a growing need for personnel managers to integrate older people into new and constantly changing forms of co-operation within companies.

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This is where the project comes in It develops a useful tool in the form of qualification modules for personnel managers in the wider sense, including immediate superiors, team leaders and works council members. It aims to broaden their background knowledge and organisational skills. Younger and older employees of both sexes should have equal job and employment opportunities when teamworking is introduced and further developed, and teamwork structures should be designed in such a way as to prevent the teams from "ageing" prematurely.

Apart from analysing literature and documentation, this tool is based on surveys in the partner companies, national and transnational workshops and discussions between experts at inter-plant level (for more details see Point 3).

IG Metall's partners in this project are two European sister unions, the Amalgamated Engineering and Electrical Union (AEEU) in Great Britain and the Swedisk Metalworken union. Operational practice is represented by the John Deere Werke, Mannheim, the Rover works, Solihull, and two plants belonging to Volvo Construction Equipment in Hallsberg and Eskilstuna. The project is co-ordinated by the Dortmund Centre for Social Research at the Landesinstitut.

The most important condition for participation in this international pilot project was, and is, that all the European partners involved have the same understanding of the problem situation. Works councils and personnel managers as well as team members and team leaders are showing increasing interest in looking beyond the confines of their own countries and learning from the experience and approaches tried in other European countries.

2. *Project subjects: vocational training and trade union training*

The project centres on continuing training of persons performing personnel functions in company teamwork. That means not only personnel managers in the conventional sense but, in line with the decentralisation of company decision-making processes, increasingly also those close to the grass roots, such as team spokesmen.

Their ability to look after, appraise and encourage team members and to optimise technical and social co-operation within the teams is very important for the job and employment opportunities of skilled and semi-skilled staff, of men and women, local labour and migrant workers, older and younger employees, etc. However, it is often not paid due attention, is neglected, is geared solely to operational effectiveness, without paying sufficient attention to the potential of different groups of workers or social processes within groups, including the processes by which "weaker" team members and groups of persons are excluded. In the future, not only will the ability to work as part of a team probably become an increasingly important part of job descriptions, both for blue and white-collar workers, but so also will the ability to guide others or to work without supervision and to co-ordinate teams, including taking on or taking over personnel functions for a limited period, on a temporary or rotating basis.

In this grey area of methodological and social skills that is the realm of a wide variety of trainers and consultants, not all of them equally reliable, there is a need for greater professionalism and for trade unions to bring more influence to bear. The project seeks to use methods of applications-oriented research to make a contribution to this.

The second aspect of vocational training to be considered is the "continuing training, and the ability to benefit from it, of older employees when it comes to organisational modernisation".

This topic will be outlined only briefly here.

Whenever teamwork is introduced, the greater requirements as regards the scope of the work and flexibility of deployment frequently make the composition of teams an issue, and in this connection also the "trainability" of different groups of people in the company. Older employees may be excluded or exclude themselves. In the context of the project, we are interested in mechanisms of exclusion and examples of integration in the field of skills and qualifications. We are also concerned with the role of the know-how of older employees - technical, organisational and social know-how - when companies go over to teamworking.

In the course of the project, the first references to transnational training work by trade unions came in transnational workshops, where persons involved at company level, chiefly works council members and shop stewards, gave their audio-visual presentations of case studies on teamwork and older workers in the workplace, using their comparative analysis of the examples (scales, points awarded, etc.) to identify each other's problems and make further contacts.

Secondly, they come from the product of the tool, which will shortly be available in German and English and will be used in training events at company and intercompany level.

One important lesson the project has taught us is the fact that in our field of organisational and staff development, transnational comparisons and transnational learning must deal not only with formal structures and models, but also with social processes in the company, with actual procedures and circumstances, and not least with the importance of informal structures. If this is not done, we will be chasing shadows and may under certain circumstances do more harm than good. What do we mean by this?

3. Comparative vocational training research: some pitfalls and how we dealt with them

We shall illustrate this from the example of our surveys in the three European countries mentioned. The pitfalls referred to are not characteristic only of transnational surveys, but this is an area where it is particularly easy to get bogged down, especially if projects are underfunded (as Leonardo projects often are). Lest we should become entangled beyond help, let us look at these pitfalls a little more closely.

Transnational surveys often fail to look at social and informal processes, rules and practices in the company, either out of necessity or because they are considered superfluous. An understanding of such processes may nevertheless be crucial when looking at the selection of staff for continuing training, for example. Secret age limits for continuing training, competition between colleagues for such training, it being a commodity in short supply (because expensive), and the exclusion of particular groups of workers are random examples of such processes. It is well known that moving towards this "second operational reality" requires a relationship of trust between researchers, "facilitators" and "researched", and that takes time. How companies treat older employees - and other groups, such as women or migrant workers - is a sensitive subject, and it is easy to fall back on formal rules. Comparisons based on such treatment are then often divorced from reality.

A second pitfall is the failure to survey several different points of view and perspectives on the same subject. Researchers often confine themselves to the company's official version of e.g. progress or skill levels in teamwork. Here, too, this failure is often dictated by circumstances. Are we given the opportunity to discover and compare how management, representatives of sectional interests within the company, and, if at all possible, groups of workers at different hierarchical levels, see and appraise things? And if not, what do we end up with as the basis for a transnational comparison? As with the other pitfalls, the dilemma is that the survey is particularly superficial, often out of necessity, as we have said, in the very areas where a particularly thorough survey is required.

Third pitfall: confusing a guiding principle or other model with reality. The survey is based on exemplary descriptions or the company's presentation of models of e.g. teamwork or the use of human resources within the company. This masks the sober and in detail often difficult process of developing new forms of organisation or different ways of dealing with employees' potential. This process can however only be seen by having a "second look", which is often not possible, or made possible, for transnational comparative projects. Transnational comparisons of models may be attractive, but more exciting and informative for those working in the companies concerned are comparisons of actual development processes that do not exclude difficulties but attempt to learn from dealing with them.

Particularly important in the transnational context and a problem that cannot easily be overcome is the tendency of companies in the "limelight" of transnational comparison to play to the gallery and present themselves in a self-consciously positive light. This mixture of description and marketing, which is the stock in trade of management and, to a lesser extent, of sectional interests, and which, if we are honest, is also found among scientists, who despite their best intentions are not always entirely independent, can probably be overcome only to the extent that the benchmarks of company self-portrayal are shifted towards greater problem-orientation, openness and transparency. That is probably still pie in the sky, however. Maybe trade unionists and social scientists can help here.

Looking at just these pitfalls - and only in relation to the survey phase as the basis of the comparison - is enough to make one feel uncomfortable. How did we deal with them in the project? It is nothing sensational, but worth mentioning all the same.

Over quite a long period of time, we built up a relationship of trust with people in the trade unions and companies concerned, and this gave us access to "normal" operational cases, not just to cases suitable "for show", and enabled us openly to identify development problems in the workplace as operational normality.

We concentrated on specific examples of the operational application of teamwork - mainly in series production - and tried to understand those cases from different perspectives, using several methods and several approaches.

Different perspectives: in each case interviews were conducted with several members of the team, the team leader and the relevant foreman.

Several methods: the interviews were supplemented by participatory observation.

Several approaches: the first survey included company and workplace inquiries and discussions with experts; the second survey proceeded as outlined above.

The results of the first and second surveys of the same case differed from each other to a remarkable extent: not to put too fine a point on it, our first approach landed us in the traps discussed above, but in the second, thorough approach we came close to the operational reality.

We combined company surveys with subsequent workshops. Persons from the companies concerned, in three countries, who took part in the survey were given the same set of questions to prepare for the workshops, where they presented and compared their answers. This procedure gave us a continuous and manageable basis of experience of the personnel and the subject.

Finally, to avoid getting bogged down in the details of the operational cases, we consulted generalists who were able to identify general trends, e.g. in the development of teamwork in the respective countries. This enabled the workshops to categorise the operational cases.

4. *Conclusions: less ambitious objectives and wider perspectives*

Our experiences of the pitfalls of transnational comparative research were quite humbling.

We abandoned our initial aim of devising for each of the three countries involved a tool with a national perspective, including a cross-border dimension, in favour of the more realistic objective of simply putting a national perspective to the fore, while striving for a cross-border dimension as a component and extension of that perspective. Since the German team invested the most work both conceptionally and practically, a tool was developed for people in Germany which incorporates aspects of transnational comparison. The English-language version is intended only as an incentive for the production of tools in Great Britain and Sweden.

We are pleased that, as a result of taking part in the project, there is not only a greater willingness in the respective companies and trade unions to integrate older employees, with their background knowledge and organisational skills, but also a greater awareness of the processes whereby these persons may be integrated or excluded, and a greater readiness to expand the company's range of options beyond the early exclusion that is still favoured. This broadens the choices open to both sides, companies and employees.

An important side effect of the project is that learning processes between the generations at the workplace have become recognisable as an important dimension of a learning organisation, both at the level of co-operative working structures such as teamwork and at the level of the company as a whole. We are trying to make this clear in the tool.

An in-depth, genuinely simultaneous transnational comparative investigation of this subject is still lacking, however.

5 Integration In The World Of Work And Occupational Silling Of Young People In The Education System: The Current Situation in Spain At National And Regional Level

Lander Sarasola Ituarte, Luis M. Naya Garmendia[124]

The education and training system in Spain has traditionally been based on institutionalised schooling in which the world of work has been very little involved. This lack of involvement was one of the main driving forces behind the push in the mid-1980s for a reform that would provide alternatives to this situation. Although the changes that have been introduced do not break the tradition of an institutionally-based system, those parts of the system concerned with the vocational training of young people at both middle and advanced levels must now take account of the world of work, with young people undertaking statutory periods of work experience.

This institutionally-based system has had a high failure rate over the past few years, with some 30% of pupils not successfully completing even the compulsory period of schooling, which was up to the age of 14 prior to the 1990 reform but was then raised to 16 to bring it into line with the minimum working age in Spain.

Another key element implying a major break with the previous model was that, under the 1990 reform, pupils had successfully to complete their compulsory schooling before being able to progress to post-compulsory education, whether academic or vocational (see Table 1). This change was justified by the need to give credibility to some vocational courses which, prior to the reform, pupils were eligible to join if they had simply completed their compulsory schooling, without necessarily having done so successfully. This meant that these vocational courses had become not only a stepping stone to Formación Professional [vocational training] (skill levels 2 and 3), but also a place of refuge for pupils who had failed in the education system and could not join the labour market because there were no jobs for them or because they were too young or had inadequate skills. As a result, the system became so marred that it was utterly rejected as a valid training route by many population groups.

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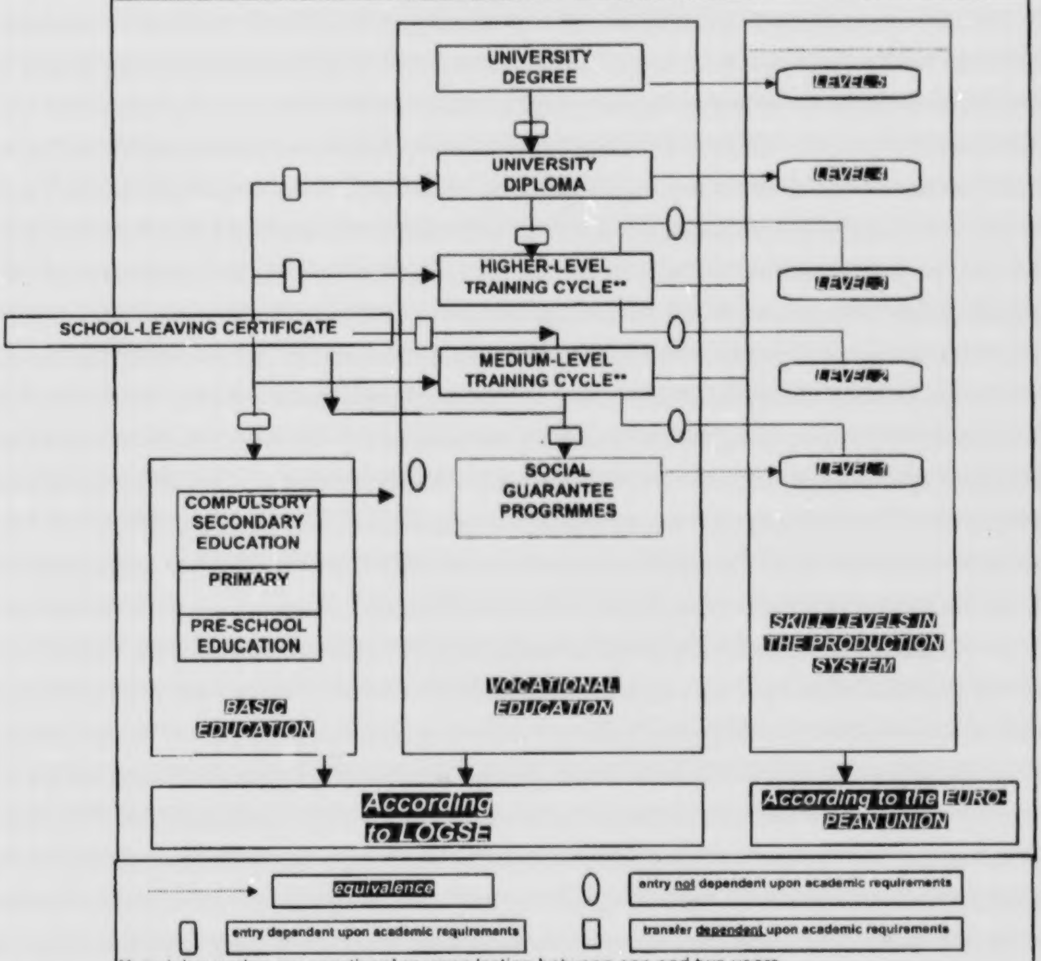
CONNECTIONS, ENTRY AND TRANSFER ROUTES AND EQUIVALENCES IN THE EDUCATION SYSTEM


UNIVERSITY DEGREE
UNIVERSITY DIPLOMA
HIGHER-LEVEL TRAINING CYCLE**
SCHOOL-LEAVING CERTIFICATE
MEDIUM-LEVEL TRAINING CYCLE**
SOCIAL GUARANTEE PROGRMMES
COMPULSORY SECONDARY EDUCATION
PRIMARY
PRE-SCHOOL EDUCATION
BASIC EDUCATION
VOCATIONAL EDUCATION
LEVEL 5
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL 1
SKILL LEVELS IN THE PRODUCTION SYSTEM
According to LOGSE
According to the EUROPEAN UNION
equivalence
entry not dependent upon academic requirements
entry dependent upon academic requirements
transfer dependent upon academic requirements

** training cycles are vocational courses lasting between one and two years.

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However, even now that the reform has smoothed out the problems in the system by removing the discrepancies concerning the minimum age for completing compulsory schooling and the official recognition of vocational courses, the existing educational model, like any other, still produces failures. It seems that the failure rate is falling but there are still failures nonetheless, and this at a time when the labour market cannot help to reduce the effects of failure by integrating the young people concerned. It is obvious that the labour market could help to ease the effects of failure at school, but for two factors. Firstly, the current rate of unemployment in Spain is one of the highest in Europe and, for these particular young people, is continuing to rise. Secondly, these young people have so few skills and there is no guarantee for employers that they will be able to acquire sufficient skills by undertaking *continuing training**. If we add to this the fact that, in periods of crisis such as this, there is a vast army of well-trained young people who are willing to work for low pay, then the employment prospects for these young people are far from rosy.

The fact nevertheless remains that these young people are there, and are going to continue to be there; and failure to take action in their respect could cause profound inequalities and be the first step towards a marginalisation that could have incalculable consequences. Awareness of this possibility meant that the 1990 reform made provision for the creation of special programmes as "*compensatory actions that must be implemented by the public authorities to strengthen the education system and so prevent inequalities deriving from social, economic, cultural or other factors*", as stated in Article 64 of the 1990 Ley de Ordenación General del Sistema Educativo [LOGSE - Law governing the General Organisation of the Education System]. The purpose of these special programmes was to tackle the social problems caused by this situation, which meant that they became known as *Programas de Garantia Social* [Social Guarantee Programmes].

The coverage and object of these programmes are defined as follows: "to provide pupils who fail to reach the objectives of compulsory secondary education with basic and vocational education that enable them **to enter working life or pursue further studies**" (LOGSE, Article 23.2). In 1991, the target population was defined as being young people between the ages of 16 and 20, that is, from the age of completion of

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compulsory schooling to about the age to which young people may remain at school because of having to repeat certain academic courses.

However, although the general definition of the target population is clear, its reflection in practical programmes that match the needs, interests and abilities of this population is less clear. For example, the heterogeneous nature of the target group in question means there is a need to match these variables with several alternatives to enable young people to enter working life or pursue their studies. Various models have thus emerged and attempts are now being made to co-ordinate them at national level, integrating the varying efforts of the Communities that form Spain, some of which operate autonomously in the areas of education and training, in accordance with their respective Statutes of Autonomy.

However, the various alternatives that have emerged at national and Autonomous-Community level can be grouped into three categories, depending on the link maintained with educational institutions and the contact established with the world of work - always with the intention of helping young people *to enter working life or pursue their studies*.

Thus we have **one model** for young people who have failed within the education system but wish to continue their studies and have little difficulty in accepting an educational framework. This model tends to be implemented by educational establishments and, since the aim is to reintegrate them in the education system, pupils have no interest in combining training and employment. The idea of setting up a model to enable pupils who have failed at school to pursue their studies within the system has been strongly criticised as being self-contradictory - and especially since one of the notions underlying the reform was to give special attention to pupils with difficulties, including special curricula to enable pupils with very different abilities and performance levels to complete compulsory education successfully. However, the fact that this model is known as "*Iniciación Professional*" [initial vocational training] underlines the fact that it is intended to be a starting point for pursuing studies not in the academic sphere (bachilleratos - school-leaving certificates) but in the vocational sphere (Ciclos Formativos Medios - medium-level training cycles).

If we take into account the fact that the middle grade of this training route is intended to bring pupils up to European Union skill-level 2, then *Iniciación Professional* is intended to bring them only up to level 1 so as to guarantee them access to level 2, and the explicit lack of contact with the world of work is an indication of its clear preparatory nature. The fact that it is offered in an institutional context means that it excludes a large proportion of pupils who have failed within the system - those for whom it is precisely the institutional context, its organisation and functional and relational inertia, that is at the root of their failure, because of their "phobia" about institutions.

A second model takes the form of "*Talleres Professionals*" (vocational workshops). Operating outside the institutional context, these are training workshops designed for undereducated young people, most of whom have failed within the system and who are marginalised and at risk because of the lack of job opportunities that might enable them to move without difficulty from school into working life. These workshops do not have any fixed or standard structure and may be set up or run not only by the education authorities but also by non-profit-making bodies (though in co-ordination with the education authorities). This model is offered by various types of institution and in varying forms, in terms of workshops' duration, nature, amount of theoretical content and connection with the world of work through work experience. As in the case of all Social Guarantee Programmes, this model does not lead to any type of qualification and students simply receive a certificate of attendance and fulfilment of the stated objectives.

In this context, mention should also be made of another alternative that has been offered since 1985 by the labour authorities (in fact, by the Ministry of Labour and Social Security - MTSS) to promote the occupational integration of unemployed young people under the age of 25 - ***Escuelas Taller y Casas de Oficios*** [educational workshops and sheltered employment]. Introduced at a time when the education authorities were offering only an institutionalised route to young people who had failed within the education system, this programme provided both these young people and those who had successfully completed their compulsory education and had chosen to pursue vocational training the opportunity to undertake Formación Processional de Primer Grado [Grade I vocational training], as defined in the 1970 *Ley General de Edu-*

cación [General Education Act]. The diverse nature of the target population, in terms of interests and abilities, meant that this programme served merely as a filter for access to Grade 2 training, in which levels of academic and vocational achievement were clear.

This programme is now part of the training offered by the public authorities to unemployed workers under the age of 25. In this case, however, training is alternated with work experience under apprenticeship contracts, which we shall describe later.

This model, in its various forms, is now becoming established as an effective alternative to academic failure. Although there are no rigorous studies to confirm this, if we take the rates of absenteeism and occupational integration of young people undertaking this training as indicators, we can conclude that it is effectively achieving the objective of tempering social risks. Possible reasons may be those associated with the successful achievement of objectives, that is, the breaking of a long chain of successive failures, and with the strategies followed by these programmes, which are:

- *dealing with diversity by offering individualised, personalised learning*, using various methods and activities, depending on students' different levels and styles of learning and levels of difficulty or complexity. For example, there is flexibility in the way in which student groups are formed and the pace of work is set, since special curricular content and methodology can be introduced in one or more areas;

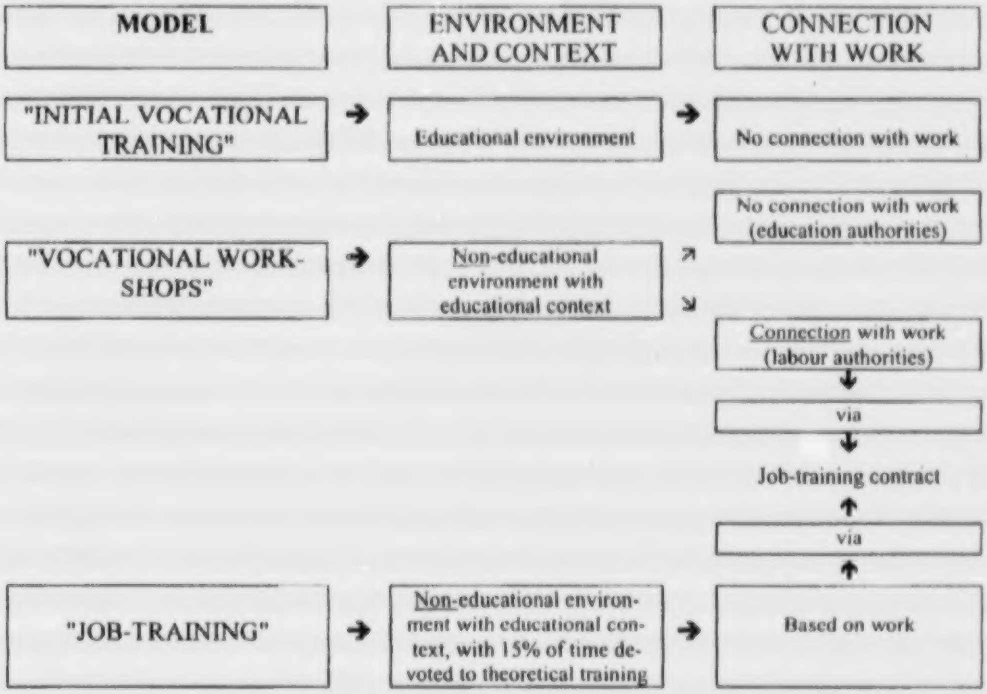
- *seeking constructive, meaningful and useful learning* that gives access to a whole range of learning opportunities and enables students to develop abilities and skills that give access to further learning and enable them to give meaning to what they learn. Each new learning opportunity is connected with students' existing knowledge, so that they can make connections between new learning and existing knowledge, which means that existing knowledge can be restructured and meaningful links can be made with clear, relevant and structured content. The intention is that the knowledge base thus created can be used to solve practical problems;

- *seeking co-operative, participatory learning*, on the basis that learning is more profound when it is derived from action, involves the student as a responsible participant and stimulates independence, creativity and self-confidence in the student. Self-criticism and self-assessment thus take the place of criticism and assessment by the teacher;

- *opting for holistic, interdisciplinary learning*, whereby technical and vocational content goes hand in hand with instrumental content and content focusing on personal and social development, even though much of the latter may often be rejected because of the association with a history of successive failures.

These teaching principles for work with this target group are valid both in institutional contexts and in the semi-institutional contexts described above. In the latter context, a ***third model*** for achieving occupational integration may also be applied, though under special conditions: "*Formación-empleo*" [job-training]. This model has become increasingly popular in recent years, though the reasons for its popularity are its economic rather than its educational advantages, since it is perceived as another way of promoting employment, being linked to contracts of employment with a training objective: *Contratos de Formación* [job-training contracts].

OCCUPATIONAL-INTEGRATION ROUTES UNDER "SOCIAL GUARANTEE PROGRAMMES"


MODEL
ENVIRONMENT AND CONTEXT
CONNECTION WITH WORK
"INITIAL VOCATIONAL TRAINING"
Educational environment
No connection with work
No connection with work (education authorities)
"VOCATIONAL WORK-SHOPS"
Non-educational environment with educational context
Connection with work (labour authorities)
via
Job-training contract
via
"JOB-TRAINING"
Non-educational environment with educational context, with 15% of time devoted to theoretical training
Based on work

This model therefore seeks to combine training and employment and aims to ensure that participants receive the theoretical and practical training they need effectively to take on a skilled job or occupation, as defined under the classification system applied by the enterprise in which they are training and working.

The essential features that link this type of employment contract to the Social Guarantee Programme for pupils who have either failed within the education system or left it without any occupational skills are, from the educational point of view, as follows:

- the ***target group*** is young people aged between 16 and 25 who do not have the qualifications required for the trade they are learning, have not previously held the job covered by their job-training contract and have not used up the maximum apprenticeship period under a previous contract. It should be noted that Social Guar-

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antee Programmes are designed for young people aged between 16 and 20, which is why they fit in with this contractual model;

- the ***period of employment*** may be not less than 6 months and not more than 3 years (unless otherwise specified by the collective agreement covering the sector concerned) and employment is on a *full-time* basis, including both actual working time and time spent on theoretical training;

- ***theoretical training*** must be alternated with actual work and must be undertaken away from the work-post or in the form of distance learning. The amount of time devoted to theoretical training must be not less than 15% of stipulated working time. This training can be provided at vocational training centres set up by the enterprise itself or by employers' or trade union organisations, or by approved private centres or public centres linked with either the education or labour authorities;

It is important to point out that, where an apprentice has not successfully completed compulsory education, the theoretical training provided under an apprenticeship contract will have the immediate objective of filling this gap, thus creating another clear link with the Social Guarantee Programmes we are analysing here.

- ***practical training*** is provided through the actual work the trainee worker performs in the enterprise and must be linked to the actual tasks involved in the occupation or job the trainee is learning. The employer, or a person with the necessary occupational skills who is assigned by him, supervises the training process. No supervisor may be responsible for more than three apprentices;

- ***certification of the training*** received comprises two aspects: *a certificate of theoretical training* is issued by the training centre, certifying the trainee's attendance and the grade achieved; *a certificate of practical training* is issued by the employer, in a standard format, specifying the length of the apprenticeship and the level achieved.

This certification is important for various reasons. Firstly, it demonstrates that the young person concerned has acquired skills in his or her chosen occupation. This is useful when young people start looking for a job when they have completed the maximum period of employment allowed under this type of contract and are not given a permanent job at the enterprise at which they have been training.

Secondly, it makes it easier for the young person concerned to acquire a ***Certificado de Profesionalidad*** [Certificate of Professional Competence], which accredits occupational skills acquired through unregulated training processes, which may be either *formal* (e.g. the theoretical and practical training provided under an apprenticeship contract) or *informal* (training acquired through work experience).

There are Certificates of Professional Competence for every occupation and they are governed by Royal Decrees that are valid throughout Spain. Certificates define the *occupational skills** specific to each occupation and the minimum training content associated with them. They cover the following aspects:

- the *occupational job profile** of the occupation in question, specifying the occupational skills required, broken down into *skill units** with value and meaning for specific jobs within the occupation;
- the theoretical and practical content of training;
- the training path, organised on the basis of sequential *vocational modules**, the training content of each of which is linked to a specific skill unit;
- the total duration of full training and of each individual module, expressed in hours;
- the training body's training objectives and criteria for assessing trainees.

It is important to note that, when the purpose of an apprenticeship contract is to ensure that the trainee can competently undertake an occupation, the theoretical training provided under that contract must refer to each and every theoretical module included in the training path for the occupation in question. On the other hand, when the apprenticeship contract relates to a specific post, the theoretical training provided under that contract need refer only to the vocational module associated with the skill unit with value and meaning for that particular post.

Certificates of Professional Competence may also be awarded to workers who have not taken part in training processes under Social Guarantee Programmes, simply to provide them with certification of their skills and thereby enable them to progress in their occupation. The multipurpose nature of this option is in accord with the spirit of an education reform whose aim is to increase the number of ways in which people can acquire training and skills outside the traditional education system we described at the beginning.

However, the creation of this meeting-point, at which various means of acquiring training, skills and certification and of dealing with failure within the education system converge, gives rise to innumerable unknowns, despite the obvious goodness of the intentions behind it. In fact, it has become the door at which less scrupulous employers come knocking, in search of cheap, subsidised labour. The lack of checks to ensure that employers keep their side of the bargain, by providing training and ensuring that trainees' tasks are in accordance with the training objective, means that the trade unions are constantly complaining about apprenticeship contracts.

The fact that limits are placed on the employment of young people under such contracts is an indication of their potential for misuse. For example, enterprises with up to 5 workers may have just 1 apprentice; enterprises with 6-10 workers may have 2; enterprises with 11-25 workers may have 3; enterprises with 26-40 workers may have 4; enterprises with 41-50 workers may have 5; enterprises with 51-100 workers may have 8; enterprises with 101-250 workers may have 10, or 8% of the workforce; enterprises with 251-500 workers may have 20, or 6% of the workforce; and enterprises with more than 500 workers may have 30, or 4% of the workforce.

However, the maximum number of apprentices per workplace does not apply to apprenticeship contracts formalised under Social Guarantee Programmes organised by the education authorities or to contracts entered into by enterprises with their own training centres.

This means, then, that the organisation of institutionalised programmes that include periods of work in enterprises without numerical limits on the number of apprentices that can be employed presents a problem. As regards pay, it can be enormously advantageous to employ these young people in low-skilled sectors, since it is merely stipulated that their pay must be set by collective agreement and may not be less than the National Minimum Wage. In 1997, the National Minimum Wage was ESP 66 630 a month (or a little less than ECU 400).

Leaving aside the comments that might be made about the pay aspects of these contracts and their usefulness within the framework of integration and skills programmes, it may be noted that the ways that are being used in Spain to address the problem of failure within the education system have two points of reference. On the one hand, school and the educational context, which is in line with the traditional institutionalisation of vocational training and whose purpose is to enable students to fill the gaps in their education and pursue academic studies or vocational training. This is an essential first step, since young people must successfully complete compulsory education before they can move on to any form of regulated study.

On the other hand, there is the world of work. Both as regards regulated forms of vocational training and as regards *Formación Occupational** [occupational training], the world of work is gradually acquiring a key role in training and the acquisition of technical and social skills.

However, both the occupational alternatives and the notion of apprenticeship contracts in general - *and Social Guarantee Programmes in particular* - are giving rise to criticism concerning pay levels and some more than reasonable doubts about whether the required 15% of working time is being devoted to training. Trade union organisations have made numerous complaints in this regard.

The field of regulated vocational training is also subject to various problems associated with compulsory work experience in enterprises, including:

- its potential use as a source of cheap labour;
- problems associated with relocation, maintenance, occupational accidents, etc., which complicate the smooth running of the system;
- production organisations' lack of sufficient material and human resources to collaborate in training processes, because of a traditional lack of participation in these processes, as already commented upon;

- insufficient regulation of relations between training centres and enterprises.

In conclusion, it would seem that the range of options open to pupils who leave the system because of poor performance, ability or motivation are improving considerably. The key factors are that:

- *the education authorities are being obliged to offer alternatives* for pupils who do not successfully complete their compulsory education, since the education system, which was reformed in 1990, now makes successful completion of compulsory education a requirement for entry both to further academic studies (bachillerato) and to vocational training (Ciclos Formativos);
- *the increasing linking of training and work*, sometimes as a compulsory complement to theoretical training, sometimes as a basis for occupational integration;
- *job-training and apprenticeship contracts*, which offer an alternative to institutionalised training, though there are some doubts about their use;
- *the gradual spread of Certificates of Professional Competence*, which means that certificates issued under unregulated training programmes can be validated.

Overall, recent changes in models concerning occupational integration, the acquisition of occupational skills, their certification and use, are significant. They imply a move away from a past that has been marked by the inertia, institutionalisation and recalcitrance of the education system and towards the establishment of real links with the world of enterprise.

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Glossary

Occupational skills: all the knowledge, abilities, skills and aptitudes acquired through training processes or work experience, which enable a person to undertake and successfully perform certain roles in work situations.

Continuing training: activities to improve or upgrade the skills of employed workers so as to increase enterprises' competitiveness and enable workers to remain in their existing job or achieve promotion.

Occupational training: activities to provide unemployed workers with the skills needed by the production system to enable them to find work.

LOGSE: Law governing the General Organisation of the Spanish Education System, which was passed in 1990 to replace the 1970 General Education Act and which considerably alters the model of vocational training (including access, requirements and the provision of skills) and the routes to occupational integration.

Vocational modules: cohesive, *regulated* vocational training units whose purpose is to provide people with the occupational skills associated with specific qualifications. Each module is linked to one or more *skill units**.

Occupational job profile: the whole range of occupational skills, including technical abilities, co-operation and relational skills, the ability to organise work activities, understand the economic aspects of work and adapt to change. A profile is expressed in terms of a series of occupational achievements or actions of value and meaning in the job concerned. These profiles make it possible to establish a system of correspondences and validations with occupational training and work experience.

Skill unit: the combination of occupational skills, expressed in terms of a set of achievements with a specific value and meaning. This is the smallest unit of occupational skills that can lead to a qualification and must be accredited before any such qualification can be awarded.

Workshop 4:
Organised comparative research, experiences in bilateral co-operation in vocational education and training research

Annie Bouder [125]

The working methods adopted by this group were quite different to those described by the first three groups. Participants had indeed been requested to present the work they had carried out on international co-operation and comparison, but to do so in operational terms. In other words, they were supposed to reach practical conclusions on ways to improve the conditions under which international co-operation takes place.

For this, participants were asked to focus on three aspects:

to explain the background to their project: why had they chosen the **topic** and why had they decided to carry out an international comparison project on this topic;

to explain why they had chosen their particular **methodology** and, where appropriate, how this had changed in the course of the project;

to explain what **organisational procedures** had been used to manage the project and to organise the research.

Those making the presentations did not dwell on content details, i.e. not on their aims in the research, nor on their findings. So I will not be giving you details of these, but will instead outline practical ways in which research co-operation may be improved in the field of vocational education and training. So we shall not be covering everything, but only a few salient points. For the rest, we urge you to have a look at the written texts of the speakers.

On this matter, the title of our workshop was chosen to show that our work was centred on bilateral co-operation. As it turned out, however, not all the projects included were bilateral. So we digressed, so to speak. But, in so doing, we came to the conclusion that what is most likely to make a difference in this area is not whether bilateral or multilateral co-operation exists, but whether there is a **history of co-operation** between agencies co-operating in a project. In the workshop, projects were presented where the co-operating agencies had a history of co-operation at the time at which they embarked on the project, and others where they had not. We clearly saw how those agencies with a history of co-operation were involved in projects that were rooted in a common research area, on a subject of particular relevance to both agencies and their work programmes, relating to a policy issue in one country or the other. On the other hand, there were projects by agencies who were having a go at co-operation, seizing the opportunities provided by European tendering procedures. These agencies had no past history of common growth and, sometimes, no future plans or possibilities for including such work in an ongoing work programme. This was to show up in the difference in both the way in which the project was conducted and in the results which could have been achieved.

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[125] Report by Annie Bouder, CEREQ/Marseilles

Despite their different starting points, everyone was in agreement over at least two major difficulties: establishing the aim and time. The **difficulty in establishing the aim** is not a linguistic or translation problem, but one of formulating ideas and of being able to relate "the Word" to its national context and particularly to the conditions for implementing employment and training systems in the different countries. In fact, in the course of a project, the aim at the start is, more often than not, rethought or thought up anew. The second difficulty is **time**. To establish their aim, the agencies carrying out the projects need time in which to get a good grasp and understanding of the ways in which vocational education and training systems are set up in their partner countries. Indeed, one of the agencies mentioned the fact that it had used intercultural mediation to do so. In this regard, all participants agreed that the greater the number of partners, the more difficult the task, and that bilateral co-operation was much easier than starting out with twelve or fifteen agencies. But time is also needed in order to stand back from your own national situation. It is often forgotten in European and international comparison that, although much of the effort is directed at fully understanding the other system, you have to take a good look at yourself and stand well back in looking at your own.

All these agencies, which have different histories of co-operation, participate in European programmes and they have all applied for European funding, such as that provided under the Leonardo programme. The group tried to portray this situation by saying that within the framework of international co-operation within European programmes we are dealing with a **continuum of co-operation histories**. In other words, that there are projects that are just beginning, coming together through tendering procedures, and others that already have a history of co-operation in developing an understanding of each others' systems, that are more advanced in this continuum in relation to the development of their research aim. From this heterogeneous situation, Europe and European funding bodies are helping the agencies to progress down the continuum. They are providing the opportunity for agencies and projects that are embarking upon co-operation to make progress in developing their understanding of each other. Likewise, they are helping to create a European research community. They therefore shoulder great responsibility since, in order make progress, a number of conditions must be fulfilled. Yet it sometimes happens that such investments go straight down the drain; European money helps to set a dynamic into motion which fails to take off, or which grinds to a halt at its first attempt.

How can such progress be given a helping hand? A lot of ideas were put forward, including mention of the fact, for example, that CEDEFOP had in the past a **researchers' forum** where research agencies could meet and talk about given topics which they had prepared in advance. This forum also provided an initial opportunity for research partners to make contacts and get to know each other, so they could find out whether they wanted to get together and develop a joint research project. Although imperfect in its implementation, this instrument served a purpose which has not been taken up again by anything else or anyone else today. Because of this, the first step in co-operation within the framework of a Leonardo programme (the first three years) is often that of jointly establishing a topic. As a result, the ensuing administrative, financial and time constraints become counterproductive given the time needed to develop ideas, to get an understanding of each other and to get a better understanding of oneself.

Participants in the workshop were unanimous on one point: research cannot be carried out by electronic mail. Teams and individuals need to meet and talk. Many more opportunities for meeting (and, therefore, their funding) are needed, as it is only through direct contacts that ideas can truly continue to grow.

Is there a better solution for establishing co-operation between the different partners in a particular project? We do not think so (be it a bilateral or multilateral project, or what have you), but all solutions have their own particular merits. What is certain, however, is that co-operation, be it at European or national level, will have different results depending on whether it is between two partners or fifteen. The number of partners may impede the achievement of certain results, and this eventuality should be borne in mind in each case.

I have not mentioned up to now the great difference between projects receiving funding under the Leonardo programme and those funded within the framework research programme for basic socio-economic research (TSER). The working conditions and co-operation under the TSER programme, or for a project it funds, are completely different to those for projects funded through the Leonardo programme. This could provide food for thought in the discussions which I now urge you to begin.

1 Researching Comparatively: Experiencing in Vocational Education and Training in England and Germany

John Bynner[126]

Introduction

On the face of it, comparing young people's youth transitions in England and Germany should be straightforward. Both countries are advanced industrial societies with much the same employment structures to which young people's vocational preparation is directed. There has also been a certain amount of cross-over from one country to another, with Britain's national youth training scheme of the 1980s copying in some respects Germany's dual system and Germany using the example of British youth training to find remedial routes into apprenticeships for those young people in the early 1980s who could not get them (Bynner and Roberts, 1991). Notably the impetus for change in both countries was not so much the internal difficulties arising within the system of training, but the external changes brought about by the restructuring of the labour market. This involved a radical decline in youth jobs in Britain, and the obsolescence of a large number of trades for which young Germans had been trained. The core of the difference between the two systems lies not only in different institutional forms through which preparation for work takes place, but also deep-rooted cultural traditions which underpin the culture of training in Germany and the culture of work in England (Bynner, 1994; Rose, 1990).

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[126] City University England

Cultural differences imply different meanings attached to different sets of actions, brought about by variations in the national context in which the action takes place. Such national contexts have social and historical components which are often masked in simple statistical descriptive comparisons between countries. Our study, *Youth and Work, Transition to Employment in England and Germany*, carried out in the late 1980s (Bynner and Roberts, 1991; Evans and Heinz, 1994), attempted to illuminate these distinctions, by first engaging an extensive exploration of the meanings of common concepts in the two countries through collaborative teamwork. The key concept here was that of ‘career route’ or ‘career trajectory’: what does it mean in the German as opposed to the English context? The second component attempted to access meanings through the experiences of young people engaged in transitions in the two countries. We wanted to know what characterised, in descriptive terms, their behaviour, attitudes and perceptions in relation to their own transition experiences. The idea was to try to contextualise these by looking in detail at individual lives in England and Germany.

Our study thus attempted to embrace within one design the two foci of comparative research: statistical regularities between countries and cultural-historical differences (Kohn, 1987). The first is concerned with the use of comparative data to support hypotheses about processes and outcomes between countries. The second attempts to explain the similarities and differences between them.

The problem of equivalence

In undertaking the study, we confronted immediately the key question which all comparative researchers need to address - that of ‘equivalence’. In the words of the psychologist C E Osgood, we need to confront the problem: “When is the same really the same? When is the same really different? When is the different really different?” The problem of equivalence resides in all areas and at all levels of the comparative study and consequently is critically important in the research design (Scheuch, 1989; Sztompka, 1993; Teune, 1990). Some problems are technical and in theory can be resolved through understanding and agreement; others concerned with the cultural context are more difficult to surmount.

Population sampling

We have to assume equivalence of population definition, sampling frames and methods of drawing samples. Are school leavers defined in the same way in different countries; how can we achieve comparability between them? Nothing can be taken for granted in this respect, and the only solution is a detailed working out of specifications between countries and the testing of feasibility so that standardisation can be achieved.

Measurement

We have to assume measurement comparability across countries, but in reality measurements may take on quite different meanings in different cultural contexts. For example, attitudes to new technology, or aspirations in connection with entry to the labour market, may use the same variable descriptors / questions to elicit information, but actually have quite different meanings in relation to the institutional context in which the person expressing them is embedded.

If indicators change meaning in different contexts, then the constructs they represent may similarly lose comparability across contexts. Even apparently straightforward measures of educational attainments such as school examinations - A levels in England, Baccalaureate in France and Abitur in Germany - may appear to perform similar functions for higher education and employment selection. But in terms of their history and the policy framework in which they operate, they are quite different. Tapping such constructs through the 'latent variables' approach, - for example a general attainment score obtained from a number of indicators - has been advocated, but still cannot get round the problem of the changing meaning of indicators.

Finally, there are technical problems with measurements to do typically with translation. The *lingua franca* of much comparative research is English, but what we are often taking for granted in, say, translating an opinion statement about training from one language to another, actually begs a lot of questions about the responses we are eliciting. Sometimes comparative data produced by attitude questions in the Eurobarometer surveys, for example, may be displaying differences that are less to do with the attitude that is being assessed than the connotations of the particular words in the opinion statements in different language cultures.

Analysis

The problems confronted in the previous two areas now become manifest. Survey analysis providing quantitative comparisons across countries may be seriously flawed if its differences with respect to sampling and the interpretation of measurements are not properly understood. This is not to rule out quantitative comparisons, but to understand what lies behind the figures they produce, we are inevitably forced to use qualitative biographical / anthropological / socio-historical approaches (Heinz, 1991). Thus qualitative and quantitative analyses need to go hand in hand in the comparative study, setting up what the comparative sociologist, Charles Ragin, calls "a dialogue between variables and cases" (Ragin, 1987).

To tackle this, we adopted a research design which was novel in many respects and yet we believe was crucial to the rich insights gained about differences in transition experiences in the two countries.

Research design

Four teams from universities in Germany and England: Bremen, Bielefeld, Liverpool, Surrey and the co-ordinator based in City University in London, planned the work through a series of meetings in two countries and then carried it out. The research is described in detail in Bynner and Heinz, 1991. One of the most novel features of the research design was the goal of using survey data for quantitative description, but not within the context of representative sample survey design. The emphasis instead was on *matching* individuals and groups pursuing similar career patterns in the two countries but also located in contexts which were economically contrasting. Thus samples of young people were selected for study in two towns with contracting labour markets in England and Germany - Bremen and Liverpool - and two towns with expanding labour markets - Paderborn and Swindon. Within each town, 160 young people were selected to match pre-determined characteristics in two cohorts of equal numbers: 16-17 year-olds and 17-18 year-olds, equal numbers of girls and boys.

The key determining characteristic for sample selection was career route. Following much conceptual work on what career route meant in the context of the two countries, four were identified: academic/professional, skilled, partly-skilled and unskilled. The concept to which these labels refer embraced both the outcome of vocational preparation and also its form; highly institutionalised in Germany through the dual system, and less so in Britain through the variety of routes to skilled work (Evans, 1990). The semi-skilled groups were more concerned with dropouts from apprenticeships or remedial training schemes in place of them in Germany, and in Britain the typical youth training schemes not leading to recognised qualifications and partly skilled manual work which young people often entered directly from school when leaving at the minimum age of 16. The unskilled routes defined groups in Germany, who seemed unlikely ever to achieve the goal of apprenticeship as a route to employment, and in Britain young people involved on the periphery of the labour market either picking up casual unskilled work or unemployed. (Unemployment, of course, was statutorily impossible in Germany, because every young person had to be engaged with the education system in some way or other up to the age of 18.) The only route which was clearly comparable between the two countries was the academic/professional one which always involved higher education, although in Germany completing it could take twice as long as in England. Another factor was compulsory military service in Germany, something which had ended in Britain in 1956.

Having identified relatively large numbers of young people from the survey samples available to us that matched the requirements for this categorisation, the next step was to attempt to match individuals within the categories in terms of the kinds of occupations to which they were heading. Thus a hairdresser in Liverpool would be matched with a hairdresser in Bremen, and a fitter in Paderborn with a fitter in Swindon and so on. Such matching was mainly possible for the skilled routes. On this basis, equal numbers of young people were selected for each of the four routes in the two countries, 40 in each cohort, 160 in all. All the young people had completed a specially designed questionnaire on their transition experiences. Many were also interviewed to elicit much more of their own personal biographical histories in relation to their transition experiences. In the follow-up study two years later, the project moved entirely into this qualitative mode, with 40 young people selected in each area to represent the career routes covered in the original study (Evans and Heinz, 1994). Another important feature of the design was the use of bilingual research assistants to undertake some of the interviewing of young people in the other country as well as their own.

Comparative analysis

The data generated in the design described above, pose problems for analysis. The desire to pursue matching principles in the design to the limit, is directly at variance with ideas of representative random sampling on which statistical estimation and inference is based. In fact, in certain respects, our design looked more like an experiment directed towards tests of the effects of different factors and their interaction on a dependent variable such as the occupational outcome of training, than towards comparison of survey estimates. However, we had relatively large samples of the two towns in England and the two towns in Germany, so it would have made little sense not at least to see what kinds of differences quantitative comparisons revealed. Table 1 shows one of the most striking examples of these, comparing the total English and German samples on a number of indicators of work-relevant skills and experiences.

Somewhat to our surprise, despite the very much more institutionalised and comprehensive system of vocational preparation in Germany compared with that in England, on all but one of the indicators, the English samples showed far higher numbers claiming the skill. The only exception was "felt stretched and challenged" and "felt all your abilities were being used". These differences held up, surprisingly, in all trajectories, including the academic one, which produced comparable prevalents in the two countries, where employment or training experience was yet to occur. They also held up in the towns of both expanding and contracting labour markets in the two countries.

Table I: Average percentages who had each experience in each country[127]

	England %	FRG %
Been given responsibility	70	35
Been able to make decisions for yourself	75	35
Had a chance to use your initiative	65	33
Developed new skills and abilities	60	48
Set your own goals/targets	53	35
Felt stretched/challenged	43	40
Felt a sense of achievement	60	53
Felt all your abilities were being used	43	43
Worked as a member of a team	75	35
Had to work to a deadline	60	43
Been asked for advice by others on how to tackle a problem	53	25

How can we explain these differences? One plausible explanation is that the German system prolongs the transition from school to work and people engaged in it do not feel they have achieved working status until they have ended apprenticeships. In England, leaving school generally means in the young person's eyes getting a job. So even if in the mid-1980s, when a training scheme was what was entered rather than a

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[127] Numbers for each experience are averaged across trajectories across towns for each country ie total for each cell = 40

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job, the young person would still tend to see the experience as more work-related than to do with education and training.

This holds good for particularly the skilled and semi-skilled employment categories. But another interesting feature of the figures is that as Table 2 shows, the claimed skills are higher in the higher trajectories than in the lower ones, even though the lower ones in Britain are where most work would actually be done. As we might expect, the top scorers tended to be on the skilled route, but the academic group was not far behind, and in fact in one town, Swindon, easily came top.

Table 2: Work-related experience: percentages averaged across 12 experiences

by trajectory and area

Average %		Li	SW	Bre	Pa
Ac	%	60	73	40	50
Sk	%	63	63	45	50
Un	%	55	63	30	35
N.D	%	40	48	20	30

Note 1: Li = Liverpool; Sw Swindon; Bre = Bremen; Pa = Paderbom

2: Ac = Academic; Sk Skilled; Un = Uncertain; ND = No destination

Another comparison showed a difference, in the other direction.

(Figure 1) **Satisfaction With Life Conditions**

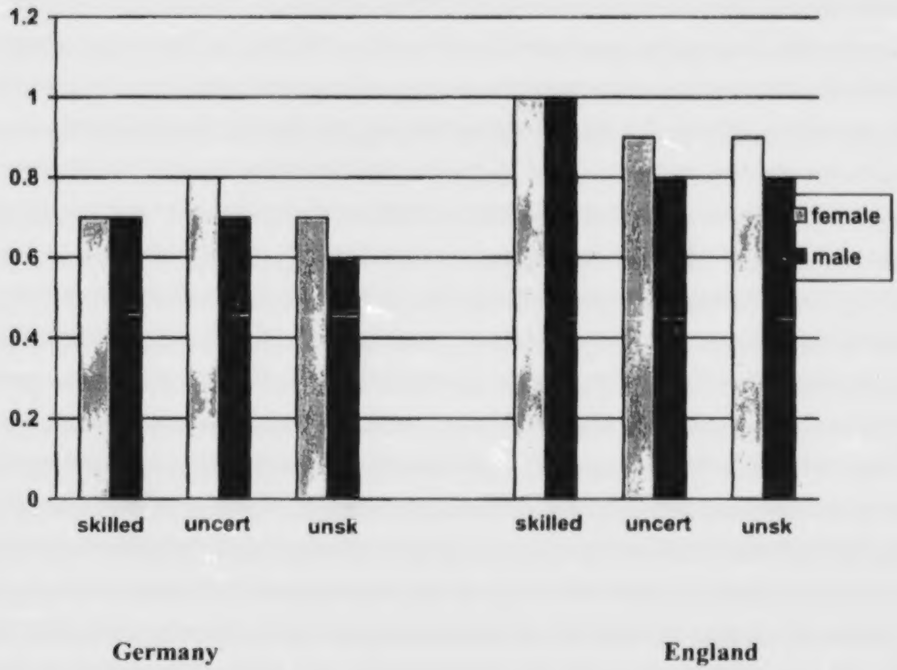

Figure 1 shows the levels of satisfaction with life expressed by the samples in the two countries, broken down also by career route. Consistently, the German young people said that they were more satisfied with life than their English counterparts. So despite the feeling of greater work competence in England, this was not accompanied by higher levels of satisfaction when compared with Germany.

Such findings immediately pose challenges of interpretation which inevitably lead to investigations along biographical lines. In the first phase of the Anglo-German study this was undertaken with selected members of the sample, who were interviewed or asked to supply more information about their training and working lives in writing. The rich insights this material produced, led to a moving over entirely to qualitative methodology - biographical interviewing - in the follow-up study which took place two years later.

From a combination of quantitative and qualitative examinations of the issue drawing on the whole datasheet, a picture began to emerge of what lay behind the two kinds of differences displayed in Table 1 and Table 2. Germany has a training culture in which all young people expect to engage in some kind of vocational preparation before they are ready for work. Until they have worked, ie completed their training, they do not feel that they are competent to work or have achieved the identity of 'worker'. In other words, they set standards which are based on training ideals, rather than those of the workplace. Countering this apparent lack of skills and work experience, is the feeling of satisfaction which tends to accompany the status of being in education, and knowing that they were on a route, or would get on to one, that would lead to a specified occupational destination. Hence, in a sense, the German trainee identity is somewhere between that of student and that of worker. In contrast, there was no transition phase for most young English people - at least until the early 1980s when training schemes aimed at the whole school leaver population were first introduced. Even though those (usually boys) in the limited number of highly valued apprenticeships received adult worker rates of pay, for the English young person, their families and their employers, you were either at school or at work. Once you were at work you should be competent to do it, and hence adult worker identity was achieved. Even if you were a student, your vacation work would constitute the experience that counts as adult work: "ready and able to do anything". That this accelerated transition to adulthood was accompanied by less satisfaction with life was perhaps a reflection of the lack of clear direction.

Interpretation moving from qualitative to quantitative data is the most we are usually able to do with this kind of data. But techniques suggested by Charles Ragin, enable us to formalise the approach more, using the quantitative data but in a much more restricted way. Table 3 sets out a quantitative comparison of a set of indicators, including country, extended transition, career route (trajectory), work experience ('has skills') obtained by aggregating the skills and experience claimed, occupational self-confidence, expecting to move to find work, and satisfaction with life.

(Table 3) RAW COUNT & SCORES FOR EACH ANGLO-GERMAN GROUP

	Extended Transition A	Trajectory B	Has Skills C	Occupational Self-confidence D	Expects to move E	Satisfaction with life F
Liverpool						
1	0	1	24	4.63	23	22
2	0	1	25	4.70	27	29
3	0	0	22	4.60	24	20
4	0	0	16	4.28	24	15
Bremen						
1	1	1	16	3.83	23	25
2	1	1	18	3.50	13	29
3	1	0	12	3.03	17	26
4	1	0	8	2.80	13	19
Swindon						
1	0	1	29	4.83	34	21
2	0	1	25	4.70	32	26
3	0	0	25	4.48	28	18
4	0	0	19	3.90	26	10
Paderborn						
1	1	1	20	3.38	19	30
2	1	1	20	3.23	10	32
3	1	0	14	2.80	19	26
4	1	0	12	2.70	11	20
Median	*-1.5*	*1.5*	*19.06*	*3.83*	*21.44*	*23.0*

Ragin's technique involves converting such data into the data that can be analysed by means of Boolean algebra. Basically each "variable" is converted into a dichotomy indicating whether an attribute for a case is present or absent. To produce such attributes we dichotomise each variable distribution at the median and produce the truth table shown (Table 4). The '1's mean that the attribute is present and the '0's mean absent. In this case we are treating the groups defined by trajectory, labour market and country as "cases". The methodology enables one to test hypotheses about causes of satisfaction with life in relation to background characteristics of labour market experiences. We produce a Boolean equation

$$F = ABC + Ade + aBCDE$$

(See columnheads of Table 1 for meanings). This tells us first that satisfaction occurs in situations of extended transition and work experience - the classic student picture as in England. Secondly, satisfaction can occur in situations of extended transition coupled with absence of occupational self-confidence and lack of desire to move to seek work. This is typically the skilled worker satisfaction of Germany. Third, satisfaction can occur in situations of accelerated transition, providing they are accompanied by work experience and occupational self-confidence and willingness to move, but also when people are located in the highest academic or skilled trajectories. This is the skilled worker satisfaction of England.

(Table 4) TRUTH TABLE FOR LIFE SATISFACTION

	Extended Transition A	**Trajectory B**	**Has Skills C**	**Occupational Self-confidence D**	**Expects to move E**	**Satisfaction with life F**
Liverpool						
1	0	1	1	1	1	0
2	0	1	1	1	1	1
3	0	0	1	1	1	0
4	0	0	0	1	1	0
Bremen						
1	1	1	0	1	1	1
2	1	1	0	0	0	1
3	1	0	0	0	0	1
4	1	0	0	0	0	0
Swindon						
1	0	1	1	1	1	0
2	0	1	1	1	1	1
3	0	0	1	1	1	0
4	0	0	0	1	1	0
Paderborn						
1	1	1	1	0	0	1
2	1	1	1	0	0	1
3	1	0	0	0	0	1
4	1	0	0	0	0	0
Median	*-1.5*	*1.5*	*19.06*	*3.83*	*21.44*	*23.0*

Researching comparatively

The example given of unravelling an Anglo-German difference in vocational experience and outcomes, points to an appropriate methodological strategy for undertaking such studies. The approach involves the use of what is described as 'descending' and 'ascending' methodology in tandem (Van Meter, 1990; Bynner and Chisholm, in press). The descending methodology resides in the idea of populations sampled to estimate their characteristics using classic statistical methods. Ascending methodology builds up pictures of populations from typologies of cases, drawing together common characteristics of experience to expose similarities and differences between countries.

In analysing the results of such studies, and drawing conclusions from them, the key principle to be employed is that of *triangulation*. Triangulation in the area of sampling, demands in the descending mode, multiple perspectives from different populations relating to the same topic of interest, such as in the case of vocational training, teachers, trainers employers, young people and their parents. Representative methods of sampling will ensure that all key sub-groups are incorporated. Disproportionate stratified sampling may be necessary to ensure that the rarer groups in one country or another are adequately represented. In such cases, weighting the sample data can recapitulate the population characteristics. In the ascending mode sampling is based on theoretical principles with cases selected to test and refine concepts and hypotheses (Glaser and Strauss, 1967).

In relation to measurement, we need multiple indicators of all key variables to minimise the risk of translation problems and to ensure that meanings are adequately exposed across a wide range of indicators of the same basic characteristic. Again, data derived from different sources, teachers, trainers as well as young people, is another key resource. In the ascending mode, we need to build opportunities into the design for gaining the widest possible access to relevant experiences. But most central of all the decisions about the data to collect and the triangulation process, is the process of cross-national collaboration itself. This resides in the cross-national research team where conceptual analysis is essential. Use of bilingual definitional research assistants to do the interviewing is another essential element.

Finally, in relation to data analysis, the key challenge is to *accommodate complexity*. Classic multi-variate techniques will serve for the data produced in the descending part of the design. In relation to the ascending part of it, socio-biographical analysis and hierarchical clustering methods will be needed to build up types of experience from common characteristics. The Ragin Boolean algebra approach offers one straightforward approach to analysis at the interface between the qualitative and the quantitative data.

The balance between the descending and ascending elements on a research design will vary depending on the focus of the investigation. But in studies of vocational preparation, perhaps more than most others, it would seem that both components are almost certainly always necessary. We need representative sample surveys in which the individuals sampled are themselves studied independently as cases. With such a strategy the best insights into real similarities and real differences between countries in the experience of vocational preparation are likely to come.

Note of Cross-national collaboration

The Anglo-German study on which this paper has been based, was an example of cross-national collaboration, which has provided the foundation of continuing programmes of work. One of the collaborators, Ken Roberts of the University of Liverpool, extended the scope of the study applying the same methodological approaches to studies of youth transitions in Poland, and following Poland, a number of other countries of post-Communist Eastern and Central Europe. The focus of this work has been to examine particularly the impact of the social and political changes on young people's transitions, with particular reference to family, labour market and the institutions of the state concerned with young people.

Alan Brown, from the University of Surrey team, has pursued an interest in the comparative analysis of the construction of occupational identities, doing further work in Germany, Holland and Britain. He has drawn particularly on the methodological approach of "close matching", to compare, in very precise terms, the occupational socialisation of young people matched across different countries in terms of occupational destinations. His research focuses on half a dozen occupations through which the young people have been selected.

Karen Evans who directed the University of Surrey work, has undertaken further comparative studies in Canada and Britain, and most recently with colleagues in East Germany, again focusing on the relations of education to work in the different countries and the transition to employment.

The German colleagues, Walter Heinz at the University of Bremen and Klaus Hurrelman at the University of Bielefeld were engaged in large-scale programmes of research funded by the German Science Foundation (DFG) when they participated in the Anglo-German study. Both have drawn on the Anglo-German experience extensively in their own writing, and have collaborated subsequently in publications arising from or related to the work.

In my own case, I have drawn extensively on the work for teaching a module on comparative research methods in a research training Masters degree on Social Research Methods and Statistics. I have also returned to the data many times, to apply new techniques of analysis, especially those deriving from Charles Ragin's writings on comparative data analysis using Boolean algebra. In collaboration with Lynne Chisholm now at the European Commission, I ran a workshop on comparative research methodology at one of the meetings of the European Science Foundation Network on Youth Transitions. This led to a further examination and specification of the requirements for effective comparative youth transition research (Bynner and Chisholm, in press). The paper draws for case study material on the Anglo-German project.

Finally, I was invited by OECD to join an expert group on developing a research project on childhood risk of social exclusion. Again, I see my involvement in this as bringing together two principal research interests - longitudinal study and comparative research as exemplified through the Anglo-German Project.

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2 Comparative vocational education and training research of value to educational policy - quality assurance in terms of conceptual approach, research organisation and support policies

Ingrid Drexel[128] *and Martine Moebus*[129]

The new market in international comparative vocational education and training research - background to the current debate

Today, when huge problems are faced by young people trying to enter the labour market and adult workers seeking to upgrade their qualifications or to retrain, strong criticism of existing systems of vocational education and training is being voiced in many countries. It is fashionable to refer to other, (allegedly) better, solutions to policy problems in the field of vocational education and training which exist in other

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countries; this explains the current boom in comparative vocational education and training research. This process is vigorously by the development of the European Union and the policy considerations for vocational education and training that ensue from this, be they the aim "convergence" of vocational education and training systems in Europe or the quest for "best practices" which can be transferred from one country to another. In particular, of course, the boom in comparative vocational education and training research is boosted by the research and development programmes launched by the European Commission and the substantial funding assigned to them. The field of comparative empirical research into vocational education and training, which had long been the preserve of a relatively small circle of specialised researchers chiefly in the domain of industrial sociology, has begun to develop into a large new market.

This development is accompanied by forces for and trends towards change, which not only represent opportunities but also risks in terms of the education policy benefits of the results and hence in terms of future vocational education and training policy-making - risks that are not always apparent at first sight but derive from the processes of transformation of vocational education and training research.

On the one hand, there are attempts by those working in disciplines that have not hitherto been concerned with vocational education and training (such as comparative educational science in Germany) to gain a foothold in that field and to apply their traditional concepts and standards to it. Although this injects some interesting new ideas into the field of comparative vocational education and training research, it carries with it the danger that the specific features of vocational education and training, which derive from its close dovetailing with the business world and the labour market, cannot be properly assessed on the basis of such concepts and methods.

On the other hand, new institutions and groups, often operating on the fringe of institutions involved in further education and/or management constancy, are entering this market through international co-operative pilot projects. Such projects frequently produce thoroughly innovative and/or sound results, particularly as regards curricular development and instructional techniques. Problems only begin to arise when they use their project findings, which are necessarily specific, limited and difficult to transfer

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(because of the conditions in which the pilot project is conducted), to draw conclusions for vocational education and training policy. The researchers highlight certain new procedures being implemented in other countries' education systems, select this or that feature of the new procedures, show (or assert) that it would be useful in the other society and make a case for its inclusion in another education system without reflecting on the consequences for the rest of the system.

Then there is a third development: with a view to establishing new providers of vocational education and training research in this field, a wide array of personal, technological and communication networks is being created which trade in topics and concepts relating to education policy, official information and background material on how to obtain funding and in particular the names of potential partners from other countries. The generation of international co-operation and co-operative projects with the aid of such networks, however, glosses over the essential prerequisites of serious international research (and research co-operation), and indeed the nature of such networks precludes their consideration. This poses a threat to the quality of research co-operation and hence to the inherent quality of any findings.

In this situation, if the benefits of comparative vocational education and training research for vocational education policy and science are to be maintained and enhanced, quality assurance is necessary from both a conceptual and an organisational viewpoint, especially with regard to co-operative processes.

Against this background, our paper discusses certain conceptual, methodological and co-operative conditions which we believe to be particularly important prerequisites for comparative vocational education and training research conducted through international co-operation; they are presented in general terms, and, in some cases, illustrations are drawn from our own studies - these illustrations are not, of course, intended or suited to serve in any way as "models" or "prototypes" but are only meant to provide a more graphic depiction of the ideas being presented.

One of these studies, which focused on the construction industries in the United Kingdom, Italy, the Federal Republic of Germany and France, was carried out by CEREQ (Centre d'études et de recherche sur les qualifications) in the 1980s. It used international comparison to ascertain the extent to which this business activity was determined by general characteristics of the building trade and how much it depended on the national situation. The study was commissioned by the Planning Authority for Construction and Architecture of the French Ministry of Housing, Construction and Transport, and was part of the programme on employment and the upgrading of professions in the construction industry. For the project, a network of European researchers was engaged to conduct field surveys, on the basis of a common set of questions, and to organise a colloquium to present the research results, the outcome of several years of international co-operation. (Campinos-Dubernet *et al.*, 1991).

Another study was that conducted by the ISF (Institut für Sozialwissenschaftliche Forschung) in the late 1980s, in conjunction with various French research groups including CEREQ, to examine new intermediate school courses in Germany and France (Drexel, 1993). The German Ministry of Education and Science commissioned the ISF to explore the options, benefits and risks inherent in the creation of new school courses at the intermediate level and thus of new direct access to employment in the middle tiers of industry, commerce and administration. To this end, the researchers assessed experience gained in France, where a large number of new courses of this type had already been in existence for some considerable time.

A further study in this field being conducted under the Leonardo programme, once again by the ISF in conjunction with the CEREQ (Martine Moebus), but also involving the Institute of Educational Research (IER, represented by Alan Brown), is examining new training and career patterns for production-management staff in France, Britain and Germany. One specific field of enquiry relates to the reasons for, and the consequences of, replacing managers recruited from the shop floor with university graduates but also covers possible new configurations involving scope for promotion and sideways entry into production management.

In the pages which follow, we shall begin by drawing on our experience of internationally-conducted comparative studies to formulate and illustrate conceptual and methodological specifications for comparative research into different countries' vocational education and training systems (Section 2), putting forward three proposals. On the basis of the three proposals, we shall then identify a number of specifications which we believe to be indispensable features of any co-operation in the field of comparative vocational education and training research (Section 3). These specifications will then be discussed in terms of their suitability as a basis for a system in which the quality of internationally-comparative research would be assured through the political support framework (Section 4).

Basic conceptual and methodological requirements for comparative vocational education and training research

Proposal 1: The two-way link between the vocational-training and employment systems must be taken into account.

Systems of vocational education and training are systems in the true sense of the word, as shown by Maurice, Sellier and Silvestre (1988): a change to one element completely alters the system and the way in which it operates. However, vocational education and training systems - and in this they distinguish themselves from general education systems - are also closely tied to the prevailing employment system and structures. They are continuously influenced by employment systems or, to put it in more concrete terms, by the job structures, career structures and restructuring policies of companies, as well as by the educational choices made by successive generations in the light of these factors. Conversely, vocational education and training systems, and the levels and types of qualification held by those who have passed through them, influence companies' recruitment patterns, their employment and career policies and their job-profiling strategies.

Research into vocational education and training must take account of this two-way link between the systems in conceptual terms. Although there is no need to examine the entire education system and the entire employment system with the same degree of intensity in every case - which would be impossible in any event - the position of the specific segment concerned within and in relation to both systems must nevertheless be determined very precisely. But above all, any research must encompass the links between the education system and the employment system (or the segments of each system that are under examination), for only in this way can any insight be achieved into their specific features and functions and the changes they undergo.

For example, one of the studies mentioned above (Drexel, 1993) not only examined and compared the training given to German *Techniker* and French *techniciens* but also enquired into the entire network of "access routes" to specialised intermediate posts between the tiers of manual labour and graduate staff. The concept of "access routes" was used to describe and compare the different forms in which the link between the education and employment systems manifested itself in the two countries concerned. The study also made a distinction between promotion routes (with or without formal training courses, but always involving the acquisition of skills through shop-floor experience) and routes leading to sideways entry, the formal requirements for which always include higher education but not normally shop-floor experience; this distinction represented the lowest common denominator for the comparative analysis.

The concept of access routes, with a distinction between promotion from the shop floor and sideways entry, also underlies the analyses underway on new qualification systems for production-management staff in France, Britain and Germany, although the concept was specially refined for that study.

Proposal 2: Vocational education and training systems should be regarded as ongoing processes.

Statistical analyses of national education systems, or parts of such systems, at a given point in time and comparison of their results are of little help in the formulation of vocational education and training policies. They can in fact be misleading, since they do not portray the underlying current of change which affects the education systems examined through their links with the respective national employment systems. And yet those very currents - be they politically motivated or unplanned natural processes - are an important factor in the assessment of vocational education and training systems and subsequent policy decisions, since they put into the proper perspective the structural problems of the education system and/or problems arising from its links with the relevant employment system. Any comparative vocational education and training research which aims to produce politically useful results must therefore always study vocational education and training systems (or segments thereof) over long periods of time, and development trends should be one of the key issues studied if a realistic picture is to be obtained.

Above all, a long-term approach can shed light on the inherent consistencies in the developments that occur within the vocational education and training systems being examined, as well as on the various forms of interaction between the national education and employment systems. Only then is it possible to discern the ways in which problems develop in a particular country, how they are defined, what efforts are being made to solve them (initial reforms) and how things actually develop - whether the problems are solved or exacerbated - and which social conditions in the country in question are responsible for that outcome. Such an approach is therefore the only way to indicate to policymakers whether, and to what extent, particular reform plans in the field of vocational education and training can be implemented and whether structural features from another society's education system can be successfully grafted onto their own country's system.

This can be illustrated with the aid of the study referred to above. The comparison was based not only on an analysis of the juxtaposed structures of middle-tier education and career patterns in both countries examined but also on an examination of the ways in which these structures had developed over the past 30 years or so. This line of approach uncovered different "country-specific development patterns", each with its own "development logic" (Drexel, 1993): the time series showed that the link between the vocational education and training system and the employment system followed a specific development pattern in each country, depending on the way in which past problems in the field of education policy had been resolved, i.e. previous reforms, the reaction of business to such reforms and the resulting changes in the supply of labour, the ways in which the problems that ensued from these changes were interpreted, the reforms enacted in response to those problems, and so on.

For example, in the 30 years concerned (from the start of the 1960s to the end of the 1980s), the German education and employment system primarily responded to increasing demand from business for qualifications and to growing pressure for social advancement from the population over the past three decades by implementing a rolling programme of improvements to existing courses (especially the "dual system" of part-time education combined with on-the-job training) and by developing and extending the opportunities for promotion within the various trades and professions (notably, by improving the advanced courses leading on from the dual system and by stabilising the promotion structures). The only break, as it were, in the prevailing development pattern was the abolition of the colleges of engineering in 1969.

In France, on the other hand, although there was also an increase in the demand for qualifications from the business community and a growing desire for promotion from successive generations of employees, the system did not respond for many years by enhancing the existing range of staff training courses and promotion opportunities for skilled workers, but continued to create and refine new vocational-training courses for young people at the level of the *baccalauréat* and above. Inevitably, companies' recruitment policies and young people's educational ambitions were focused increasingly on advanced school courses, and the existing promotion courses were allowed to waste away entirely. It was not until the late 1980s that was there an attempt to alter this trend by creating a new training course for engineers in the form of an in-service promotion course for experienced technicians. This attempt was, however, doomed to failure by the developments that had preceded it: the policymakers had insisted on a parallel engineer-training course for young people, and today this compromise course accounts for about 60% of all student engineers instead of the 20% originally envisaged.

The findings which emerged from our enquiry methodology, based on long-term trends, highlighted how little scope exists for autonomous policy-making in the field of education and how far reform strategies that cut across prevailing currents can be diverted from their original aims. By providing the means with which to anticipate the consequences of such decisions, the findings therefore serve to warn policymakers in the realm of vocational education and training against initiating voluntarist reforms and borrowing features of other education systems.

Studies based on a long-term perspective not only bring to light country-specific development patterns but also highlight areas of common ground:

For example, it also emerged from the study mentioned above that continuity in the promotion system is not only in the interests of the workforce but also in the interests of businesses in the longer-term, even if, as in France, they initially demand a larger pool of recruits with university-entrance qualifications. We became keenly aware that the absence or shortage of access routes to promotion can diminish the potential of the workforce.

This example also shows that studies based on a long-term approach, focusing on the reciprocal momentum for change that is generated by the vocational education and training system and the employment system, can provide policymakers in the field of vocational education and training with excellent opportunities for acquiring key knowledge and - perhaps just as importantly - can help them to avoid mistakes.

Proposal 3: Qualitative developments are especially revealing, and a co mbination of methods is essential.

Studies examining developments over a period of time should not merely consider quantitative factors - numbers going through the education system, numbers leaving full-time education and starting work, mobility rates, etc. - but should also focus in particular on quality indicators. Special importance attaches in this respect to innovations within the vocational education and training system which may be utterly insignificant in purely statistical terms but represent tentative efforts by individual educational establishments, companies or regional authorities to solve problems with the current system of vocational education and training and in its relationship with the employment system. Innovations are therefore indicators of the current pressure for change and of future changes to the vocational education and training system; in other words, they can warn policymakers against regarding given education systems (their own or another country's) uncritically as stable and sustainable.

Comparative vocational education and training research, designed to afford education policymakers opportunities to learn, should therefore use and correlate selective combinations of quantitative and qualitative, problem-based and innovation-based analyses. It should combine various methods, in particular the interpretation of mass statistics and company case studies, surveys of trainees on initial and advanced training courses or of those who have successfully completed them, instructors, etc. (see also the Bynner and Heinz/Zinn contributions to this volume).

We should like to illustrate this by again citing the Franco-German comparison already referred to at several points above. The inclusion of new courses of an experimental nature, which were often confined to individual companies or groups of companies and was not always entirely successful, nevertheless highlighted important structural issues, despite its insignificance in statistical terms. It revealed disfonctionality in the heavily-subscribed established training courses for companies and/or trainees; typical country-specific interpretation of these problems and that specific national strategies aimed at resolving them; and finally, structural features of new training courses which aided or diminished their acceptance in companies, the labour market and their respective societies.

Key requirements for international research co-operation

Constructive comparative vocational education and training research on an international scale is not merely a question of the right strategic approach to the study and the combination of methods used to pursue that approach. It also depends on successful co-operation between the research partners from the participating countries. That is almost stating the obvious. What is not obvious, however, is the fact that structural problems stand in the way of successful co-operation and that these can only be solved under certain specific conditions.

Although such problems are discussed time and again by insiders, whether anecdotally or even seriously, official reports on research co-operation have little, or at least nothing systematic, to say about these problems, because of the pressure to succeed placed on publicly-funded research. There is therefore little incentive for those who formulate research-promotion policies to take systematic account of such problems in the procedures they adopt to structure their programmes and to allocate their funds. Indeed, many promotion philosophies and procedures unwittingly lead to underestimation of the real conditions and difficulties of research co-operation, and encourage the shelving of problems, thereby posing considerable risks.

In view of these risks, let us now examine a series of requirements for international research co-operation:

Proposal 1: *The basis of good research co-operation is a realistic assessment of people and national professional standards.*

International research co-operation can only bear fruit if a strong and robust co-operative relationship exists among the researchers concerned. This is essential if they are to overcome the wide range of potential pitfalls that can materialise in the course of a project: the need for one or more partners rapidly to revise their plans which jeopardises the researchers' adherence to their work schedule, timetable and project budget; moreover, there may be divergent views on the substance of the research project and different interests regarding the treatment of the collected data, perfectly legitimate though they may be, which only surface in the course of the project.

Establishing sound and sustained co-operation throughout the duration of a study is far from easy and is subject to many conditions.

One essential requirement for successful co-operation is, in our view, that those involved should have sufficient time to become acquainted and gauge each other, however unfashionable this may sound. Unless they are familiar with each other's thought processes and lines of argument, substantive interests, theoretical approaches and personal behaviour, prospective partners in co-operative research will be unable to arrive at a reasonably realistic assessment of the task that faces them and to avoid major disa ppointments and conflicts that might even imperil the entire project or, if those involved are bound by contract, cause them to withdraw into themselves.

At least as important as knowledge of one's partners as individuals is a knowledge of the disciplines involved in the various countries, of the national professional norms and standards which influence the thinking and working methods of the researchers. If we know what is meant by good empirical practice in a given discipline within a particular country and which methods are normally used there, we can develop a common understanding of the methodologically-appropriate reciprocal contributions to the research project, an understanding that makes sense to all participants and therefore has a certain binding authority. If, from the outset, we are able to anticipate various different professional viewpoints, we can more easily prevent these from becoming a source of a permanent conflict which wears down all the participants in the co-operation process; indeed, such differences in viewpoints can perhaps be turned to advantage in the research findings. If we are aware of the institutional loyalties of the participating researchers, their working conditions and their potential career moves, we can go a long way towards to understanding perfectly legitimate - to reemphasise that point - individual interests regarding the treatment of collected data, and either incorporate them into the co-operation agreements or, where such interests might interfere with the pursuit of the common project aims, try to sideline them. And so on.

It is evident that such background knowledge of one's individual partners, their working conditions and their professional prospects and about national professional standards cannot be acquired at brokerage events and certainly not over the Internet: The acquisition of such knowledge takes time and requires direct personal dealings, with all the additional information and body language this entails, over and above the details which may be conveyed in letters, telephone and e-mail. Ideally, this knowledge should be rooted in previous co-operation; this could initially take the form of small-scale working meetings devoted to a specific topic or topics or seminars without a direct bearing on co-operation - such as those that Cedefop often used to organise. A particularly fruitful venture is undoubtedly the organisation of fairly lengthy research visits to the country in question, not only because they are a means of getting to know individual partners but also because, through contact and co-operation with numerous indigenous researchers, the visitor is able to see, and experience at first hand, the professional standards that prevail in that country. This, and gradual integration into groups of comparative international researchers, would also seem to be a particularly apt way of introducing young scientists to this type of research. Such research exchanges can be encouraged and facilitated if the institutions in which these scientists work undertake to establish closer co-operative ties with foreign institutions operating in similar fields.

In this way, for example, the contacts established between BIBB (Bundesinstitut für Berufsbildung) and CEREQ enabled these institutions to organise staff exchanges in order to foster mutual understanding of the French and German education systems and to enhance their development. This exchange of researchers contributed significantly to the development and dissemination of comparative Franco-German research studies and to ensuring their continuity. [130]

In each case, it is important to guarantee continuity of co-operation, whether the institutions merely continue to exchange the products of their research after the completion of a joint project, whether they publish their findings jointly or organise joint conferences, etc. Such longer-term continuity is essential if the fruits of a successful first joint project, in terms of acquired co-operative experience and know-how, are to be kept available and developed to reflect changes in the social fabric. This, in other words, is the only way in which partners from earlier co-operative projects can preserve the understanding of conditions in each other's countries which they developed at that time (most probably with some degree of difficulty) and update that understanding on a regular basis so that it remains a useful resource for subsequent studies.

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[130] This made it possible for R. Koch (BIBB) to act as guest researcher with the CEREQ and M. Moebus (CEREQ) to act as guest researcher with the BIBB, with support from the Carl-Duisberg-

Nor is there any other way of ensuring that policymakers in the field of vocational education and training are able to draw upon a solid basis of reliable and constantly up-to-date and self-improving research capabilities.

Proposal 2: A common cross-cultural understanding of problems is indis pensable and has to be developed.

Fundamental to comparative research conducted in co-operation with researchers from other countries are a common line of enquiry, transcending country-specific factors (i.e. a theoretically substantiated approach) and the development among the participating researchers of a more common understanding of the underlying problems, so that, however varied the actual conditions may be in a given research field, this understanding will always provide a reliable framework for empirical surveys. Defining the precise questions from the outset on the basis of terminological concepts would be unrealistic, since they would elicit different types of information in different societies; terminology and subjects of enquiry must therefore be contextualised, i.e. examined in the appropriate social context. Defining the precise questions from the outset solely on the basis of factual circumstances would exclude unknown, and hence often par ticularly interesting, information. For that reason, a common line of enquiry should be so defined that it can be effectively applied in empirical surveys of companies, educational establishments and similar bodies in accordance with national circumstances and still produce results that are relevant to the joint project and can be correlated with those obtained by the other partners.

We again draw on the studies referred to above to illustrate this point. Based on a theory regarding the constitution of social categories of labour through differing patterns of regeneration (training and career patterns), the concept of access routes to the middle tier of the employment system was developed and the key issues identified. This,

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Gesellschaft. These periods as guest researchers led to specific publications (Koch 1989; Moebus 1989.

along with a rough distinction between promotion routes and sideways entry, helped the participating French and German researchers to reach general agreement, before the start of empirical work, on which of the findings from the case studies that were separately conducted in French and in German companies were of central interest and which of them could be ignored. On this basis, the individual researchers could be left to formulate their own questions to company experts in the light of the prevailing situation. This was the only way to ensure that the company case studies which were subsequently exchanged covered all relevant developments, including those of which nothing was known at the start but which often turned out to be particularly enlightening.

This analytical question about access routes also serves in the ongoing study on production-management staff as a common basis for the definition of problems; a basis which does not simply mean reproduction of the earlier study in another field, but also allows it to be extended to other groups of people and subjects: this time we are also asking about possible combinations of promotion routes and sideways entry.

The comparative study on the construction industry referred to above, which was conducted under the auspices of CEREQ, was based on an approach which - on the model of the earlier LEST (Laboratoire d'économie et sociologie du travail) study (Maurice *et al.*, 1982) - determined the relative position of the industry concerned in each of the national societies. This approach is naturally more conducive to the observation of areas of interdependence between different phenomena than a functionalist comparison, in which individual variables are compared point by point in isolation. The approach used proved to be particular successful, especially since it was a matter of establishing whether the characteristics of the French construction industry were determined primarily by the pressures inherent in that particular branch of business activity or by the characteristics of French society. The results of the study made it possible to change the image of the construction industry, and the characteristics traditionally ascribed to it, by highlighting the significance of country-specific logic not only as it affects vocational training but also the ways in which the labour market operates and the patterns of work organisation (Campinos-Dubernet *et al.*, 1991).

Proposal 3: The flow of information and exchanges between co-operating partners must go beyond, or be able to go beyond, the research subject in the narrow sense.

We believe that comparative vocational education and training research, if it is to have any relevance to education policy, demands a sound knowledge not only of the national system of vocational education and training and the foreign system under examination but also of the respective employment systems, labour markets, typical company structures, etc. And it also presupposes at least a sketchy general knowledge of the societies concerned, in particular some knowledge of industrial relations in each country, of the structure of each economy, of certain historic facts, etc. An excessively narrow perspective, focused on a single discipline, a range of knowledge that begins and ends with education systems, is inadequate preparation for anyone confronted with a foreign partner's questions. Knowledge and experience confined to a single discipline can indeed be a dangerous thing, since they may well obscure potentially important links between different factors.

Let us cite another example to illustrate this point. Certain aspects of the way in which the German vocational education and training system works would be incomprehensible to anyone who is not familiar with the German system of industrial relations and with the role of employees' representatives at company level in vocational education and training. Similarly, an understanding of the way in which the French system of vocational education and training operates and has developed is entirely dependent on knowledge of the *Education Nationale* (the French system of schools and of educational administration) and its special status within the machinery of government. And so on.

Assuring the quality of comparative international vocational education and training research through the political support framework

In view of the serious social and economic problems that exist today, and the faith placed in "learning from neighbours" as a means of overcoming these problems, researchers who conduct comparative studies of vocational education and training systems and policymakers who support such research both bear a high level of responsibility, because quality assurance is essential.

In the previous sections we referred to certain key conceptual requirements for politically-relevant comparative research in the field of vocational education and training and suggested some fundamental prerequisites for successful international cooperation on which the completion of such research projects depends. The creation of these and other conditions for comparative vocational education and training research is primarily the task of the participating researchers. They are, however, heavily dependent on public research support and are subject to the control that is exercised through the injection of funds.

That is precisely why concerted action by national and supranational policymakers is essential. They too must engage in systematic quality assurance to make sure that comparative vocational education and training research continues to serve as an instrument for the clarification of problems and above all that quality continues to improve. This has two implications: on the one hand, unless aberrations ("snapshot surveys") are discouraged, it is inevitable that comparative vocational education and training research on an international scale will have become seriously discredited within a few years; on the other hand, targeted positive support - which is, of course, still ongoing - for the development of comparative vocational education and training research and of international co-operation in this field. In addition, the national and supranational architects of research policy, who expect comparative international vocational education and training research to produce not only quick remedies but also insight into a complex web of links between the education and employment systems, must be able to identify the risks inherent in certain instruments of research policy that are currently the subject of debate and avoid them in favour of others.

The following three proposals are used as a concise way of presenting certain elements of quality assurance which our experience has shown to be useful, if not essential.

Proposal 1: Quality control of research commissions seems necessary.

The principal aim of quality-based research policy should be to ensure that comparative vocational education and training research is conducted by appropriate institutions within an appropriate framework. "Appropriate" means several things in this context.

On the one hand, comparative international studies should be able to draw on the broad knowledge of participating researchers about their own society (not only their own education system) and on a wealth of empirical research experience. Knowledge of the real business world is probably an essential asset for comparative research in the field of **vocational** education and training; experience based purely on statistical interpretation will inevitably tend to restrict a researcher's understanding of and ability to interpret varying configurations in the countries and companies examined. Although in some contexts specialists can guarantee the reliability of certain findings, the presence of a researcher from one of the participating countries who is too narrowly focused on a single discipline is risky, not only because that discipline may not have a direct equivalent in another country because of differing interdisciplinary demarcation but also because overspecialisation can jeopardise the thematic and interpretative breadth of a study. Assembling groups of researchers from several disciplines is the preferred option in most cases, but generally requires more time for the joint definition of the problems to be examined and the methods to be adopted, as well to integrate the contributions of the various disciplines. It is obvious that research-support policies must take this into account.

Another requirement which seems essential is that the researchers should be experienced in devising and conducting major studies in their own countries, so that they can draw on that experience in planning complex international co-operation processes with all the risks and pitfalls entailed. With international projects of this type, it also seems advisable to commission researchers who are prepared to give their full-time commitment to the project and are not bound by other priority tasks with their own timetables and workloads. Both of these requirements have important implications in terms of the control function of public support policies.

Proposal 2: *The systematic promotion of knowledge of other countries is an important factor of quality assurance through research policy.*

As we have shown, comparative international vocational education and training research not only presupposes a knowledge of the education and employment systems of the countries concerned but also knowledge of those societies in general: knowledge of the historical and current political connotations of certain terminology and situations, familiarity with the principle concepts used in the relevant disciplines and by their representatives, knowledge of their professional standards and practices, their customary methodology and their perceptions of quality and awareness of the research resources available in the country in question, especially the statistical data maintained by the countries involved.

All these aspects of the pool of knowledge required for comparative vocational education and training research can no doubt be acquired by reading and through relevant courses of study, but only to a limited extent. Time spent as a visiting researcher, involving not only visits to institutes and libraries but also certain forms of participation in project work that is being undertaken in the host country, is surely more beneficial, especially to younger researchers. Such learning processes, however, are only likely to yield their full potential in a "real-life situation" of co-operation on a joint comparative research project, because, as the saying goes, "practice makes perfect".

Proposal 3: Practice makes perfect - this equally applies to research co-operation.

The primacy of practical experience is what makes targeted promotion of co-operation between researchers and between institutions in different countries so especially important.

This does not mean, or does not primarily mean, promotion in the form of brokerage events as a means of generating international co-operation or even in the form of technical networks as a means of communication and co-operation between partners from different countries; indeed, such promotion ventures, which are currently the subject of considerable debate, entail considerable risks: *ad hoc* co-operation, deriving from br okerage events, between researchers who hardly know each other and cannot assess each other, is very likely to involve substantive and methodological problems in the course of the joint research project, especially as project budgets make no provision for the necessary but time-consuming familiarisation and negotiation processes between researchers (see Gérard and Zettelmeier in this volume). Because of the severe pressure for success in funded research, such problems often have to be swept under the carpet, but they nevertheless impair the quality of the findings.

The idea that electronic networks can replace personal exchanges and serve as a cost-effective instrument of communication and co-operation seems especially risky. This underestimates the real difficulties involved in research co-operation or redefines them as technical problems, offering technological solutions. The promotion of such forms of partner search and the use of the briefest possible technologically-transmitted communications favour short-lived forms of co-operation in which only sets of questions lacking the necessary degree of complexity can be formulated and handled. The problems of substance and co-operation that result from the logic of such constructs inevitably remain hidden.

In place of (or in addition to) support for these forms of co-operation, we see a need to familiarise young researchers systematically with comparative international research in the field of vocational education and training, in particular by promoting their integration into groups of researchers with relevant experience; this can be done within the framework of projects or through secondment to institutes in other countries as visiting researchers. We also believe that special support is needed for research activities (including those being undertaken by experienced researchers) in other countries, for it is only through such support - and the additional expense necessarily entailed - that a picture can emerge which transcends national boundaries and allows intercultural knowledge and understanding to develop, a view through European rather than national spectacles. Finally, there is a need for targeted promotion of longer-term co-operation between researchers and between institutions from different countries, be it in the form of support for regular exchanges of information on ideas, initiatives and methods or be it the systematic promotion of co-operation by particular researchers or research teams on a series of international comparative projects.

This last type of support for co-operative research is perhaps the most constructive way in which political support can be lent to comparative vocational education and train ing research, for it is the only form that takes due account of the lengthy gestation period which is necessary for a researcher to become familiar with a foreign society, to develop the conceptual and methodological skills required for comparative research and, above all, to establish sustainable co-operative relationships.

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3 Management of Training Time in France and Denmark

Eric Fries Guggenheim - Jacques Trautmann [131]

Introduction

Training has a special relationship to time when adults are involved. This activity is no longer an everyday activity as it is early on in people's lives. It even means changing other occupations, be they professional or domestic, with, as the grounds for this time disruption, looking towards the future where there are expectations of changes which training will pave the way for.

The management of training time might appear simply to be a technical problem which does not influence the challenges it throws up. In reality, this is a mainstream problem and the way in which it is handled in each country is all the more significant since this shapes national training systems.

We would like to undertake a comparative analysis of training systems by examining *the management of training time* in two societies which would appear to be very different: French society and Danish society.

We will begin by examining the differences in the projects and the time frames of training in France and Denmark. We will then illustrate the similarities which emerged between the two systems both where they were conducive and non-conducive to the development of training particularly with reference to continuing vocational training.

I. Differences in philosophy and time frames between training systems in Denmark and France

The integration of training into society depends on its social function and the institutes which implement it. We shall, therefore, begin by describing some typical features of school philosophy in Denmark and France before demonstrating in what ways the social and vocational integration of training differs in these two countries.

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I-A. Social function, role of the school and organisation of instruction

In order to substantiate our theory of close links between the philosophy, social function and status of training in these different countries, we will begin with the structuring role which two institutions play in each of the systems, the 'Folkehøjskole'[133]and the 'Grande École'.

I-A-1. Folkehøjskole and social integration

Danish society is a homogeneous society in which it is not considered good form to stress differences. The majority of the population are Lutherans; the Danes do not show off their wealth or their economic success. The people who are most in the limelight like to show that they are just like everyone else.

The homogeneity of the population has partly to do with the egalitarian heritage of the Scandinavian village community and the contraction size of a kingdom which once took up a large part of Scandinavia. Reduced in the course of the last three centuries to a small country, Denmark has, nevertheless, retained its unity of language and culture, something which few European states can boast.

From the end of the eighteenth century onwards, King Frederick VI established the first teacher training colleges and sought to develop schooling for young village people. As early as 1814 schooling became compulsory for children aged between seven and fourteen and throughout the nineteenth century a very special educational ideology was shaped, particularly on the initiative of the spiritual father of the Danish education system N.F.S. Grundvig [1783-1872]. This vicar, poet and politician invented the concept of '*Folkeoplysning*' [enlightenment of the people]. In 1844 he created the first '*Folkehøjskole*', which even now continues to be the reference institution for the Danish educational system. The '*Folkehøjskole*' is a training institute for adults and it occupies a special position within the educational system. It is transversal to the entire training system without being directly linked to initial, continuing, vocational training or exclusively general training. Hence the instruction does not lead to any type of assessment or examination. It is free, based on dialogue and on exchange. It focuses on poetry, history, agriculture or physical education. It aims to encourage participants to develop a more open attitude towards life and more individual and concrete links to the practical phenomena of everyday life. In other words, it attempts to encourage the individual enrichment of the Danish citizen.

The *'Folkehøjskoler'* are residential schools for both pupils and teachers. Everyone is involved in community life by means of courses which range in length from one week to several months. They have played a major role in developing civic spirit and shaping the way the Danes, 80% rural, saw themselves. By developing a liking for apprenticeship and culture, they have shaped a state of mind and an attitude which are very favourable towards training. If we look at the total volume of training (individual, skill generation, leading to a diploma), then these activities involve more than half of the Danish working population every year. Denmark with its 5.2 million inhabitants has more than 800 training bodies. Training is very definitely one of the main dimensions in the Danish lifestyle in the same way as recreation, sports or child education.

The combined primary/lower secondary school, the *Folkekole,* is itself shaped by the Grundvig heritage. Everything is done there to integrate individuals into the group. There is one type of school for pupils aged between 7 and 16 with an opportunity to extend education by attending an additional year up to the age of 17, a strand undertaken by two-thirds of young Danish people. The unique character of this school is based on the following two features: each class is grouped together for a period of nine years under the responsibility of one main teacher and there is a common curriculum. The only differences start in respect of the common strand from the seventh year onwards. Furthermore, the class moves up the school together since no one has to repeat a year. This constant pursuit of integration by means of solidarity is also demonstrated by the inclusion wherever possible, of disabled pupils in the ordinary classes. More severe disabilities call for special groups. Finally, for pupils who have difficulty in adapting to the 'book-based' type of learning typical in school, there are

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[132] The Folkehøjskole is a residential adult education institution offering courses ranging from one week to several months.

parallel education paths starting from the seventh year onwards. These parallel paths are normally organised on the basis of the ideas of Grundvig (*efterskole, ungdomsskole*). For the over-18s who wish to reach the level of the *Folkehøjskoler* there is the *produktionsskole;* this is training which involves theoretical instruction by means of both practical learning and concrete work.

The school day is heavy, six hours of classes, five days a week from 8 a.m. to 14 p.m., with breaks every 50 minutes. This does, however, leave the afternoons free for individual activities; 70% of Danish children spend their afternoons at leisure centres, *Fritidshjem*, then after the age of 14 at the *Ungdomsskole*. There they participate in a wide variety of activities ranging from sport to cooking, painting, music, computer science, manual work, career guidance or school support. Whether school or semi-school activities, the main goal is to turn the young person into an active citizen in his private, school and professional life. The children can and must take the floor. The teacher may recognise without losing his face that he does not know the answer to a question. The normal pupil is the average pupil and not necessarily the good pupil. The school is less traumatic and learning often continues to be a pleasurable experience.

I-A-2.Grande École and social selection

The paradigmatic institution in the French educational system is the *Grande École*. But the French *Grandes Écoles* have nothing in common with the *Folkehøjskoler* in Denmark. The first *Grande École, l'École des Ponts et Chaussée*, (university-level civil engineering school) was established in 1747. The most 'prestigious', the *École Polytechnique* (polytechnic school) (1794) was reformed by Napoleon Bonaparte who introduced boarding and military status in order to keep his army supplied with young technical recruits. Then the *École Centrale des Arts et Manufactures* (university-level central school for arts and manufacturing) was set up (1839), the *École des Mines* (university-level mining school) and based on these models a whole spectrum of schools, one of the most famous being the *École Nationale d'Administration* (university-level national administration school) (1945), which turns out senior civil servants but also most political leaders.

All these schools compete fiercely with each other to attract 'the élite of the nation'. But they are above all a model for the entire school system which is organised on the basis of selection and reproduces the social hierarchy. Contrary to what happens in Denmark, school and homework take up most of young people's time and do not leave them much free time. There are no links between education and free time. School occupies most of their time and does not participate in a harmonious manner in shaping the young people's character. Education is imposed as a national obligation. Pupils adapt to it or are channelled towards less prestigious strands whilst waiting to enter the labour-market as unskilled labour.

Of course the Haby Law (1975) did create a single type of school for the 11 to 16 year olds. But the function of social differentiation is so essential to the French school that even there élite classes have been established under various pretexts: international schools, musical classes, bilingual classes, European classes, etc. So as far as the acquisition of knowledge and culture are concerned, the dice have already been cast on leaving initial education and this makes the working population very reticent about training since, in most cases, it conjures up painful memories.

I-B. The integration of training into social and working life

It is not always easy to distinguish between what comes from the occupational side and what comes from the private side in training undertaken by adults. We can, however, distinguish between training undertaken as a consequence of private initiative, what we call training in the private sphere, and training linked to employed status during working hours for employees or time spent looking for jobs by the unemployed.

I-B-1. Training and the private sphere

What is very noticeable from the outset in the French education system is the considerable importance which initial training plays in the professional and social destiny of individuals not only concerning the sector of activity but also the time taken looking for a job, the status of a first job, and career opportunities. As we have already said, French schools are very discriminating and classify young people according to a scale of values which companies have not only understood perfectly but also taken on board.

Since French schools have often been a negative experience for all those who did not manage to make the grade for white- or blue-collar jobs, general and cultural training courses on the initiative of the individual are not widespread. The main bulk of these training courses are provided by the *'Universités Populaires'* which, however, only reach a limited audience.

Hence, general training for adults in the private sphere consists mainly of so-called social advancement classes. The oldest and most prestigious institution which offers these courses is the *Conservatoire National des Arts et Métiers* (National Conservatory of Arts and Trade Crafts) (CNAM) established by Napoleon I. These training courses were quite popular in the 1950s and 1960s and they preceded the establishment of the continuing vocational training system in 1971. They were mainly financed by the State until they were transferred to the responsibility of the regions with the regionalisation laws of 1982-1983. They have since deteriorated markedly.

However, since 1984 it has been possible to attend relatively long training courses, up to 1 200 training hours within the framework of individual training leave (CIF). This training is done on the initiative of the individual but it is paid for and financed within the framework of company contributions of 0.1% of the salary payroll paid in the form of a levy for continuing training. It is still hampered by limited resources and is, therefore, rather for a limited audience. There were 28 500 CIFs in 1995, i.e. 1.25% of the working population. This figure can be compared with the 80 000 members of the Danish working population who took training leave in 1995 (2.76% of the working population) and the 25 600 members of the working population taking training leave in March 1997, i.e. 0.9% of the working population.

General training for adults in Denmark is in the form of basic training. It enables those who did not have the means or the inclination when they were younger to reach the level of knowledge acquired on completion of the *Folkehøjskoler* and to sit the *Højere Forberedelseseksamen* (the university entrance examination). It entitles the holders to undergo further training (*videregående Uddannelser*) and, more particularly, to attend university. General training for adults (*AVU = Almen Voksenuddannelse)* in terms of training leading to a qualification, is organised in a system of credit units in VUC (*Voksen Uddannelsescentre*). This training can be attended in the evenings and on Saturdays but it may also take the form of training leave or be linked to a State grant, *Voksenudannelsesstøtte*, for two years.

Furthermore, since the law of 1990 open training (*Åbenuddannelse*) has developed in Denmark. This law enables adults to undergo training or retraining outside working hours, at evening classes or weekend classes in almost all courses offered in Denmark: general training, commercial training, technical training, medico-social training and continuing vocational training for the labour-market. Since 1993 it has been possible to attend full-time open training within the framework of the regulation on the adult education training allowance scheme (VUS) which may last up to two years or training leave or sabbaticals which may last up to one year. In 1995, 300 000 individuals attended open training courses which are developing on a large scale.

Finally, in Denmark there is a very dense network of bodies offering free evening classes, normally linked to a political party like the AOF (*Arbejdernesoplysningsforbund*) close to the Social Democrats, the FOF (*Folkeligtoplysningsforbund*) close to the Conservative party or the LOF (*Liberaltoplysiningforbund*) close to the Liberal party and the network of *Folkehøjskoler, Håndarbejdsskoler* and *Husholdningskoler*. They are all bodies which provide general education with a view to promoting the personal development of their citizens (*folkelig oplysning*) along the lines of the *Folkehøjskoler* (see above). We have already stressed how important they are in the lives of the Danes. Together, these courses for adults provided training in 1995 for 800 000 people from a total working population of 2 900 000. This means that 4.5% of the working population underwent full time private general training.

I-B-2. Training and the working sphere

In Denmark the Law on training for the labour-market (*AMU=Arbejdsmarkedsuddannelser*) dates back to 18 May 1960; in France continuing vocational training (FPC) developed on the basis of agreements introduced in 1970 and implemented by the Law of 1971.

In both cases the State has been a driving force and has established precise provisions for funding [133]and implementation.

I-B-2.a) Continuing vocational training in France

In France companies are basically free to organise their expenditure as they see fit. Hence this is more an obligation to spend than an obligation to train. Continuing training courses in companies are short, on average one week. The higher we go in the hierarchy of qualifications, the greater the likelihood of people attending training: 17.4% of unskilled and semi-skilled workers, 26.3% of skilled workers and 30% of white-collar employees attended training in 1995; by contrast the percentages for technicians and engineers/middle management were 51.4% and 49.5% respectively. Training is attended during working hours and the courses seem to be increasingly integrated into work. This is in fact a task which the company confers on its employees in the same way as allocating them to a production, marketing or management post.

Furthermore, the training market is competitive and free. Companies go to the people to want to organise their training. The share of public institutions, second level institutions, universities is still small accounting for roughly one-quarter of the market.

Training for job seekers is organised by the public authorities within the framework of AFPA training leading to a recognised qualification or by using the training market.

I-B-2.b) AMU training in Denmark

AMU training, that is training for the labour-market (*Arbejdsmarkerdsuddannelsen*), is an essential part of the Danish continuing training system. The law of 1960 focused on training for semi-skilled workers. It offers training geared to the needs of industry to workers from rural areas without any industrial experience who came to work in towns. Short training courses of between one and six weeks were set up within the framework of training centres created for that purpose, the AMU centres under the aegis of the Ministry of Labour. Gradually, the AMU training courses spread to skilled workers, training normally being given in vocational schools under the responsibility of the Minister of Education.

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[133] In Denmark this is a tax, a contribution to the labour-market (*Arbejdesmarkedsbidrag*). It amounts to 8% of the income of employees and freelancers. Since 1977 it has also been levied on the income of employers (0.33% of profits).

In France, this is compulsory company expenditure. It corresponds to 1.5% of a company's payroll (1% for the training plan, 0.4% for alternance training courses for young people and 0.1% for individual training leave) for employers with more than 10 employees and 0.3% of the company's payroll for employers with less than 10 employees.

From the outset the AMU system was based on close cooperation between partners on the labour-market: employees' organisations, employers' organisations (both highly concentrated in Denmark) and the State. In the beginning the courses for semi-skilled workers and skilled workers were very different but now the AMU training system is moving towards standardisation.

Any member of the working population aged 20 or more (employee, self-employed or unemployed person) who has a lower level of qualification than vocational training or training suitable to attend technician training for a skilled worker can attend an AMU course. Trainees undergo full-time instruction. They are paid an allowance which corresponds to the maximum level of unemployment benefit. If their employer continues to pay their wages, he receives the allowance.

Training courses for the labour-market in Denmark are, therefore, increasingly linked to economic activity rather than to the company in which the trainee works. Of course, the company is more willing to release its employee for training when this training offers direct benefits but in the final instance training is always undertaken at the request of the employee.

The tripartite management of the system implies that it is the social partners who decide on the contents of the training modules offered by the AMU centres and the vocational schools under the AMU law. The different courses, therefore, lead to qualifications which are recognised by the social partners within the framework of collective bargaining agreements. Furthermore, the modules are conceived in such a way that they can be grouped together to form a qualification of an increasing level. On the basis of AMU qualifications and occupational experience 'exemptions' or 'credits' can be obtained in order to prepare for a *svendebrev* (equivalent to the French CAP - certificate of vocational aptitude) within the framework of alternance vocational training. In fact the latter has been open to adults since 1 January 1991. Adult alternance training

(*Veud = voksen erhvervsuddannelse*) is either offered to ad hoc groups or in normal initial training schemes for young people.

In Denmark continuing vocational training is controlled by the social partners in training institutions monitored by the State and is provided during normal working hours. It benefits equally to employees and job seekers: of the 267 200 participants in 1996, 44% were unemployed.

II The signs of convergence

The Danish and French educational systems are both part of the same larger socio-economic system, the European Union. They both have to deal with similar economic realities and, more particularly, the extraordinary speed of organisational and technological development which characterises contemporary production. Hence, both the Danish and French education systems are constantly changing. Of course there is not always a one-to-one continuity in these developments. As a consequence of political change, turnarounds may take place. The consequences may be even more dramatic in France where political life is highly polarised and where the Danish tradition of social compromise is unknown. Nevertheless, a certain number of convergencies seem to be emerging in the way in which the time dedicated to continuing vocational training is managed. However, we may feel some concern in observing that it is generally the interests of the companies rather than the interests of the workers which serve as the determining criterion for the best use of time.

II-A Convergence elements for the benefit of workers

Both countries have developed an original concept in Europe, that of training leave. But the principles which govern its implementation testify to differing attitudes towards the breakdown of time devoted to training during an individual's life.

II-A-1 The development of training leave

The Danes have developed a real enthusiasm for training during the last two centuries of their history. The characteristic feature of Danish educational ideology is the desire to combine practical learning with theoretical or even philosophical reflection. The very special importance of general education is not something which the French educational system would deny since it has always accorded it an important position, in vocational training, too. It is rather in its link to practical learning and to the value of informal skills that the French system falls down as well as in the systematic overestimation of the flagship disciplines such as mathematics and grammar to the detriment of curiosity-awakening disciplines.

But the main feature which distinguishes the French system most from the Danish system has to do with the fact that vocational training does not seem to be feasible unless it is offered during working hours and remuneration is given. This led to the development of the concept of training leave at an earlier date in France than in Denmark.

The principle behind the Law of 1971 was that the taking over of training and the time dedicated to it constituted a separate element in an employee's remuneration. The law of 1984, resulting from negotiations between the social partners, has reduced the scale of training leave taken at the initiative of the worker and as an expression of his personal plans. This leave has been removed from the company's training plan in which training for the employee is, henceforth, just one aspect of his work. Now the main bulk of funding is channelled into this latter form of training. It was attended in 1993 by 3 400 000 people whereas only 33 000 trainees attended individual training leave.[134] Hence the main obstacle to developing training leave lies in the funds which are earmarked for it (0.2% of companies' payrolls plus State subsidies up to 1993).

Its future seems in jeopardy since the introduction of training time capital by the Quinquennial Law of 1993. The goal of this new law was to guarantee an individual right to each employee who had not done training for some time (above all the less qualified) to undergo training. Its funding would be covered by half of the funds channelled into training leave. In reality, the negotiations between the social parties floundered in respect of the application of this individual right. They ended up with the affirmation of the principle of a simple priority to be given by companies to their less well trained employees for the longest period, hence a better balance in the priority of access to training within the company. But the result is that training leave funds have been drastically reduced in the name of a new scheme which aims to establish the individualised accounting of training time to which a worker is entitled in proportion to the time which he has worked. However, this new scheme has challenged the training leave arrangement whilst at the same time failing to set up a new system.

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[134] Even if the number of individuals undergoing training leave accounts for less than 1% of the people trained by their companies, the time spent by the first group in training corresponds to 17% of the time spent in training by the second group.

In Denmark legislation on holidays dates back to the Law of 1993. It is incorporated into active labour-market policy. It is based on the principle of giving each member of the working population an opportunity to leave his workplace for a certain amount of time, particularly in order to undergo training whilst giving his job temporarily to an unemployed person. Permission may be given not only to attend training of a vocational or qualification character from a list of 'positive' choices but also to undertake sabbatical leave for personal reasons or leave to bring up children younger than 8 years of age. Of course, the allowance paid during this leave is low, 100% of unemployment benefits for training leave, 60% in the two other cases. But this leave is explicitly envisaged with a dual goal of improving qualifications, efficiency and adaptability of workers on the one hand and enabling them to take a break from their working lives on the other.

Each employee undergoing training leave can be replaced at his workplace by another member of the working population, preferably by an unemployed person within the framework of 'job rotation'. This opportunity does not constitute an obligation except in the case of sabbatical leave but it is used in 65-70% of cases. In one in three cases it benefits an unemployed person. The allowance paid to the employee during his leave may be given to his employer if the latter continues to pay him a salary (54% of cases). Furthermore, the employer benefits from a subsidy corresponding to the maximum unemployment benefit for the replacement employee. The latter may attend training prior to his employment or, as is more frequently the case, undergo induction training for the workplace of the person he is to replace, with the support of the latter.

Training leave is very successful in Denmark. In just over two years, from 1 January 1994 to 31 March 1996, 311 000 people attended training, more than 10% of the working population. In 1995 job rotation enabled 29 000 individuals to seize this opportunity for retraining, to update their skills or to regain access to the labour-market.

It enabled 8 000 unemployed people to return to work, i.e. 4% of job seekers in the country.

II-A-2. Lifelong training

In France as in Denmark a very large proportion of the working population has no qualifications either general or vocational: 39% of the workforce in Denmark and 36% of the workforce in France (in 1990). In an economic system in which the main occupational skills are now initiative, independence and adaptability, such a low level of qualification is highly penalising.

Furthermore, it seems increasingly evident that in the face of large-scale unemployment particularly amongst the less skilled in the working population, we are 'condemned' to sharing work and income. In Denmark where the level of employment is far lower than in France, the weekly working hours are already only 37 hours. However reducing working hours, sharing jobs implies considerable adaptability on the part of the workforce and hence an ability to train and learn as well as time organisation which permits its implementation. This idea was initially developed by the European Commission on the initiative of Jacques Delors in conjunction with the launching of the campaign for 'lifelong learning'. Now this concept of lifelong training and the reorganisation of the breakdown between training time, working time, and private time which it implies, have been tentatively implemented in France and on a larger scale in Denmark.

In France there is still considerable tension between the education system and the production system. Up to the end of the 1970s, employers felt that there were too many young people compared with the jobs which companies could supply. Its two guiding principles have steadily been to preach reduced but specialised training for the majority and consistent vocational training, involving both general and technological education, dispensed in a Malthusian manner to the skilled occupations. It is only recently that employers have discovered that it might be in their interests for young people to extend their studies and for them to integrate young people into their companies by means of alternance training. Starting in 1985 this led more particularly to integration contracts for young people undergoing alternance training.

Furthermore, all levels of vocational training can now be accessed by the apprenticeship and qualification contract paths. A reorganisation of courses into strands, ranging from CAP/BEP (BEP - vocational studies certificate) to engineer training opens the door to those individuals who are a few years behind. A lack of initial training is no longer a handicap as it was 20 or 30 years ago.

Furthermore, since the law of July 1992 on the confirmation of acquired vocational skills (VAP) which applies to all diplomas in vocational and technical education and to university diplomas, members of the workforce can draw on their professional experience and know how accumulated in the practical pursuit of their profession in order to obtain exemptions from training modules in preparation for examinations which they would like to sit. This makes preparation for an occupational diploma or university qualification less difficult; it enables them to use skills acquired in a specific field in order to avoid having to do some parts of training when they undergo occupational retraining. VAP enables them to focus on what they really do not know in the new area. This means that during the limited period which an employee or unemployed person agrees to dedicate to training, he can obtain a full diploma and/or aspire to a new qualification.

Gradually the conditions for the redistribution of training time throughout an individual's life are beginning to establish themselves in France. In this new arena, initial training sometimes loses its inevitable and strictly academic character because it can be supplemented or even circumvented thanks to later periods of training inserted between exclusive periods of working activity or periods of alternance training.

Denmark seems to be far more advanced. An impressive quantity of legislative texts have reformed the relations between the education system, civic society and the labour-market since 1989. People have been encouraged to undergo training by the Law on open training which allows almost all training bodies to provide any type of training already on offer as initial training, in the form of modules attended outside working hours and at the weekend. These modules can then be put together to form a new qualification. School and career guidance structures have been set up at all levels, in training courses, in schools, in the districts and in local employment services. Finally, an incentive system of study grants for young people and training allowances for unskilled adults has been set up as well as the system of leave described above which was mainly oriented towards undergoing training.

In 1995 vocational alternance training was opened up to adults with considerable scope for 'credits' granted in line with qualifications acquired in the past and professional experience. Vocational training counsellors have thus been asked to study all requests for credits in respect of alternance vocational training for adults, submitted by trainees in AMU training seeking to validate training modules for the labour-market.

Finally, rights to unemployment benefit have been modified and reorganised in such a way that following an individual's own search for a job, he is then obliged to accept any job offered by the regional labour services or, if there is a lack of jobs, to undertake an adapted action plan elaborated in common agreement with the manpower services. The free period or period of remuneration (*dagepengeperioten*) is two years for an adult aged more than 25. The so-called active period of action (*aktivperioden*) is three years. After that the unemployed person no longer receives social assistance. For someone aged below 25 years the free period is no longer than six months so as to avoid him adopting bad habits at a crucial time in his active life.

For some twelve years now successive Danish governments, be they mainly Conservative or mainly Social Democrat, have set up the conditions for real lifelong training which allows for differences in development rhythms and the tastes of pupils and trainees. They encourage the pursuit of paths and vocations and permit retraining and adaptation in line with rapid developments which could scarcely be foreseen on the labour-market.

The number of young people entering the labour-market with only a basic school level has thus been halved in the space of ten years, falling from 11% of school leavers in 1983 to 5% of school leavers in 1993; the unemployment rate has fallen by 3.4% between 1993 (10.1%) and 1997 (6.7%) whereas, during the same period in France, unemployment has been climbing to levels above 12% and Germany is awash in unemployment. It is difficult to argue that the special link in Denmark between training and the current handling of training time has not contributed at least in part to the results.

II-B. Worrying points of convergence

The positive developments which are emerging in France and establishing themselves in Denmark in the management of training time are largely linked to state intervention. They constitute a response to developments in production methods which have led to a need for more highly qualified and adaptable workers than in the past. Furthermore, thanks to the considerable increases in productivity which they have continued to generate, they have considerably reduced the needs for labour at the very time when a large proportion of the population, particularly a large and growing number of women, would like to enter that very labour-market.

In our opinion there are two dangers which require specific attention in respect of the link between training and employment: adequationism and economism.

II-B-1. The adequationism danger

Both in France and in Denmark there is a current trend towards decentralisation. In France responsibility for vocational training has been transferred to the regions and vocational training for young people has been assigned to regional training development plans. Now these Regional Councils tend to pursue a training policy which believes itself to be adapted to local requirements and which aims to meet the needs of local employers. This would appear to be a very wise approach except that companies are only interested in a very specific group of young people, the most 'efficient' group, i.e. the young people with the best cultural and school skills. Training policies for the less able are quickly relegated to second place. Evidence of this is the fate of training schemes developed by the State which have disappeared in the regions which have themselves assumed responsibility for the vocational training of young people (they have up to 1999 to do this). However, companies, above all regional or local companies, are incapable of medium- or long-term management and a one-year perspective is already far away for them. Now vocational training cannot be managed from the short-term perspective unless you want to run the risk of sending entire classes of trainees into dead-ends in sectors with rapidly changing needs or sectors which are declining or relocating.

Furthermore, a desire to comply with the needs of companies is all too often coupled with a lack of consideration for general and even technological training and the enhancement of 'on the job' training. A desire to adapt the qualifications of the workforce to the needs of companies also leads all too often to a response to immediate needs without consideration being given to their possible development or to the need to enable the workforce to adapt to technological and organisational developments.

In Denmark responsibility for adapting national policy to local situations is the responsibility of the regional councils for the labour-market (*Regionalarbejdsråder*). Furthermore, the management of school and vocational training institutes has become very independent since the adoption of the management principle based on framework and goals. The management councils of the training bodies are made up of representatives of the district (*amtskommune*), municipality and the social partners on a parity basis. Teachers have an advisory function. The institutions are given a basic grant for equipment, another for fixed costs such as heating and finally a grant which varies depending on the number of 40-strong groups of trainees they manage to set up. This is the so-called '*taxi meter*' principle. The idea is to orient training courses towards the needs of the local labour-market. Since they know that they will have a job on the local market on completion of the course, pupils and trainees attend this training and the level of grants according to the taxi meter principle increases. The local companies are easily able to find trainees adapted to their needs and the young people can equally obtain apprenticeship places easily which then enables them to undergo alternance training.

The same criticism can be voiced here as is made of the regionalisation of vocational training for young people in France. It is essential that we offer training programmes in branches or occupations which are not so well represented at the local level. Only in this way can we interest the vocational schools on the local level in offering training which is of importance on the national level. Failing this, we run the risk of losing training courses which are essential to the national economy. We also have to be on our guard about overly conforming to the needs of one or other large company. That company can always move elsewhere which would leave the local labour-market in a very bad position.

II-B-2. The economism danger

Besides complete faith in market mechanisms, economism is mainly based on the principle that the pursuit of individual interests inevitably leads to satisfying communal interests.

By contrast, it would seem that a certain degree of redistribution is necessary and that the individual situation of some people in the social community will be reduced in order to improve the situation of everyone. Quick comparisons of the costs and advantages of training schemes and labour-market policy are not always the best. One example: the programme for Active Preparation for Qualification and Employment introduced in France in June 1992 was abandoned in September 1994. The different schemes enabling young people to obtain a job on leaving college whilst continuing to undergo alternance training operate, as do all school institutions, according to the principle of successive filters and selection by failure. This filtering led to the emergence of a hard core of young people who were particularly allergic to any form of education or vocational integration. The existence of a group of young people excluded from the labour-market and training system led to questions being put to the people responsible for labour and training policy.

The PAQUE programme was based on the introduction of specific measures or tools adapted to each group and each local situation. Most of the activities of the training bodies in this domain were undertaken in close cooperation with the production sector. It is obvious that without the cooperation of a handful of enlightened employers this programme would never have been set up. The two-fold objective was to reaffirm the character of these young people by enabling them to re-establish their self-esteem and faith in their own abilities and to give them a minimum degree of employability by companies. They had a by no means insignificant effect since they led to the training and occupational integration of six young people out of ten. And yet a financial estimate of the prohibitive character of the costs led to the disappearance in September 1994 of these integration measures. A 60% placement rate is apparently not a sufficient 'return'. At no time was a real cost-benefit assessment undertaken of the scheme.

Of course, we cannot run a public-interest scheme using the indicators established for the management of private companies but that is what invites us or constrains us to pursue the liberal philosophy. In France we have lost count of the number of schemes financed by way of experiment which were not followed up, not because of pedagogical or social inefficacy but for supposed economic reasons which often concealed more politically minded decisions.

If Denmark seems less inclined to indulge in simplistic economic calculations, at least since 1993, it does, however, seem that there as here the liberal vision developed by G. Becker in his *Theory of Human Capital* is spreading in the field of continuing vocational training. According to this theory, a distinction should be made between general and specific training. General training is in the interests of the trainee who, on its completion, will be better equipped to negotiate his salary on the labour-market, will be more mobile and less exposed to loss of income as a consequence of redundancy. It should, therefore, remain the responsibility of the individual; he should do this during his free time and bear most of the financial (expenditure linked to training and losses of salary) and psychological costs (loss of free time). Specific training, that is training in the interests of the company, training aiming to adapt the employee to the production tools, to integrate him into a new form of work organisation, etc. would more likely be undertaken by the company.

This is indeed the kind of reasoning behind current developments in continuing vocational training in France where the generous scheme of open vocational training for all vocational, general and cultural areas, undertaken during working hours and viewed as an indirect salary, has now been replaced by a clear demarcation between directly profitable and useful training for the company which can be undertaken during working hours, and training which reflects the employee's own plans. This has now been relegated to training leave for those rare individuals who can benefit from it or to social advancement outside working hours.

Even in the case of training leading to a qualification which is of direct benefit to the company, some people advance the argument that the employee attending training of this kind does not do so in the unique interests of the company but that he also benefits from it. Since training is an investment with a shared return, it would be logical to share the costs, too.

This analysis is directly behind the concept of co-investment in training introduced by the inter-professional national agreement of 1991 which was further extended by the Decree of 2 October 1992. In the case of training leading to a qualification, the company and the employee may share the costs and benefits of training. The individual attends part of the training during his free time, in the evenings and on Saturdays up to a maximum of 25% of its overall length. The company organises the rest of training time which is undertaken during working hours and bears the direct costs of training. The company, furthermore, commits itself to giving the employee priority access to workplaces which correspond to his new qualification. This commitment by the company to give material recognition to the increased qualifications obtained on completion of training is completely new in French law and is a very positive development. Beside the fact that the practical application of this provision is not a matter of course, it also constitutes a first in that exceptions can be made to the rule according to which training, which comes under the training plan, must be undertaken during working hours. The co-investment in training is another manifestation of the trend of the French continuing training system towards imposing a growing share of the costs and training time on the trainees.

The same trend is developing in Denmark where open training courses must be partly financed by trainees who bear between 20 and 50% of the costs and which must be undertaken outside normal working hours. The consequences are perhaps better accepted in Denmark than in France since the Danes have always had a very positive attitude towards training and a long tradition of training undertaken for pleasure during leisure hours. It is true that open training courses are one of the sectors of adult training which are experiencing the highest growth rates. Furthermore, the last reforms concerning open training have made provision for this full-time training to be undertaken within the framework of training leave or adult education allowances for the less well qualified (*VUS*).

All the same, there is a growing desire to have trainees shoulder some of the costs of training particularly in the field of training for the labour-market (*AMU*) traditionally borne by the State and, to a lesser degree, the companies when they continue to pay their employees during training. Hence, since the last reforms of 1994 and 1995, trainees released from companies must bear some of the costs of AMU training. Of course, the contribution required of them remains small but it will increase between now and the year 2000 and will depend on the initial level of trainees: unskilled trainees are exempt whereas AMU training courses for skilled workers and technicians will see an increase in the contribution expected of participants in training on the higher qualification levels.

Hence, both in Denmark and France, there is a tendency to remove some continuing vocational training from the general framework of institutional responsibility and to place it on the shoulders of the working population. With little impact as yet in Denmark, this trend towards transferring responsibility for training to individuals constitutes in France a complete reversal of the orientation in the agreements of 1970 and the law of 1971. Social coherence has nothing to gain from integrating the principles of company management and economic life preached by a liberal economy into social practices since it is these very principles which are undermining it.

Conclusion

Although France and Denmark vary considerably in terms of size, history, economic fabric, etc., schools occupy a central and unique position in both. Initial, continuing, general and vocational training systems have established themselves as the main path for transferring the fundamental values of the nation and maintaining social peace. The vastly different historical heritages of the two countries means that the values transmitted and the principles behind the functioning of training institutions are very far removed from each other.

Nevertheless, economic contingencies and the process of European integration have prompted similarities in the development of institutional forms of training and, more particularly, those to do with continuing vocational training. Sometimes this is seen as a way of identifying the skills which are indispensable today for production modes: initiative, independence, adaptability, a capacity for development, etc.

In both countries the time frame of training is being restructured in line with the labour-market and a more long-term perspective, that of lifelong training *'tilbagevendende uddannelse'* in Danish. But whereas training has always been a dominant factor in Danish society and the link between the continuing training system and the initial training system is a functional reality today, in France the institutionalisation of continuing training is still unstable and fragile. Continuing vocational training leading to a diploma or qualification for adults is in a particularly weak position and runs the risk of being completely abandoned in the private sphere as a consequence of current pressure towards liberalism.

And yet the Danish example in our opinion is convincing. When it is articulated in a coherent system of initial, continuing, general and vocational education, training is a powerful lever in the struggle against under-employment and in maintaining or re-establishing social peace. Of course it cannot achieve these goals alone. It must be backed by structural action on the macro-economic level leading to a sharing of jobs and income. But to abandon it to the rules of the market is tantamount to depriving ourselves of the main, if not the only tool, which will enable us to truly weather the crisis. Although the construction of Europe leads to interesting convergencies between social systems, it also implies a distribution of theories and ideologies which are less supportive of social development and democracy, and which undermine the efforts undertaken to set up and institutionalise a certain number of structures conducive to the socialisation and integration of individuals.

The Danish example shows that even the most enlightened countries with a social and Keynesian tradition can be infiltrated by a seemingly innocent economic liberalism, presenting the free market, the unconditional primacy of corporate reasoning over civic and social reasoning, and the priority of economic life over social life, as the sole way of restoring social peace, a peace where the free market is, however, the main gravedigger. In this context, we should be aware of the responsibility of economic mechanisms for destructuring the entire sector of our rich Western societies.

In an economic system in which productivity is such that one out of ten members of the working population makes no contribution to the goods and services needed for the functioning of an entire society, we will have to share working time and free time. The idea of using this to enable all members of the working population to undergo lifelong training, involving alternation between periods of employment and periods of training, is very seductive. Furthermore, the seed has already been planted in a certain number of practices in respect of training time management. We should encourage these practices, institutionalise them. By this I mean that it is desirable to pursue an economic policy in the Keynesian sense of the term in the field of training: replacing market mechanisms with these practices when they demonstrate their impotence or dangers or joining forces with them when they work in the interests of the community as a whole.

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4 Comparative Research in Vocational Training in Europe

Conducting a transnational research project: a LEONARDO survey and analysis

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Communication languages: French-German

This communication aims to present, by means of a practical case-study, the key points of a process of comparative research on vocational training, involving four countries over a period of two years from 1995 to 1997. This is a survey and analysis of the LEONARDO programme (Strand III.2A). The goal is to study occupational profiles, the practices and training of tutors in companies in Germany, Austria, Spain and France.

We would like to identify, for the purposes of debate, the scientific and methodological difficulties encountered during this experiment, in particular:

- the difficulty of moving beyond a national conceptual framework, all too often the main reference, and the prerequisites for reflection in order to set up and use a common analytical framework;
- the usefulness of intercultural mediation of the kind used in the course of this survey and analysis. As the instigator of a LEONARDO survey and analysis about in-company tutors, the INFFO Centre steers and coordinates this in administrative and scientific terms. The INFFO Centre is the contact for each partner in respect of instructions from the Commission in Brussels, for sending partners to their national technical assistance office for help with specific points of management and administration of the file. The INFFO Centre also runs the technical secretariat of the partnership: work on summarizing results, monitoring compliance with the initial goals of the project and any necessary readjusting of results, liaison with outside events.
- In constant contact with the contemporary educational and economic situation in Germany, CIRAC provides methodological assistance and intercultural support to

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the INFFO Centre in respect of project orientation, knowledge of the German and Austrian situations and the summarizing of results.

- the formulation and the adoption of a problem shared by all the different partners despite the fact that the cultural, economic and sociological context in which vocational training is provided is sometimes very different from one country to another. This problem involves far more than the understanding and linguistic definition of terms. It means giving a clear explanation of each situation and doing a comparison in order to encourage developments in the conceptual frameworks for reflection of each partner. It was only after several joint working sessions that the partners were able to define together and then expand on the conceptual limits within which each of them was unwittingly imprisoned;

- the characteristics of the partnerships established for this study and the need to set up partnerships beyond scientific bounds (intercultural, administrative and policy management of the project);

- the possible levels of comparison. The level of progress in tutorship practices from country to country led to an imbalance in research situations. There is for instance an almost complete lack of documentary sources in a country in which this is a new practice compared with an abundance of documents in countries in which it has been a subject for research for a long time;

- the choice of a common method;

- the choice of coherent statistical data, different from one country to another (different age groups for example) in order to extract data and identify investigation areas which both reflect the national objectives and permit international comparison;

- reflection on the difficulty of setting up 'good foreign practices'. We have to react to a political demand expressed by the representatives of the European Commission ('to transfer and install practices') whilst bearing in mind that this demand does not come under the traditional tasks of research bodies. By contrast it is possible to observe, to analyse the conditions for viability and transferability, to put together depending on the situation the work of studies with pilot projects closer to day to day practice. How can we reconcile these two positions?

The bodies concerned

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Introduction: Why choose 'tutors' as the topic for this study and analysis?

The examination of **'occupational profiles, the practices and training of tutors in companies'** is the subject of a survey and analysis conducted within the framework of the LEONARDO programme between 1995 and 1997. The contractor for the pilot project is the INFFO Centre, a French quango providing information on continuing training and its three signatory partners, they being DIPF, a German Research Institute, ÖIBF, an Austrian Research Institute and COEPA, an association of Spanish employers from the Alicante region.

This project has been presented as a consequence of the political context in different countries in Europe which have seen the growth in alternance training as a means of combating the high level of unemployment amongst young people. Furthermore, we think that it could take up the concerns expressed by the Commission in Brussels in its call for LEONARDO projects. Hence we suggested examining tutorship on the one hand as a possible response to the process of skill generation by workers within the company to benefit young people and adults undergoing training in the company and on the other hand as a means of improving the skills and qualifications for the tutors themselves in companies (by means of training for tutors, the organisation of tutorship within the company and by means of tutorship practices themselves).

I. From the juxtaposition of divergent interests to the creation of a transnational research subject 'tutors'.

1. ***At the beginning of the project, the subject of research 'tutorship' took up simultaneously several national political and scientific challenges which varied from partner to partner:***

- for France, since the 1980s, the public authorities had developed tutorship in occupational branches and companies as a means of securing the success of alternance training and as a possible instrument for changes in work organization within companies. It was therefore interesting to undertake a rational stocktaking of different existing practices;
- for Germany and Austria where the dual system is predominant for initial vocational training, it was a matter of re-examining a well anchored educational and organizational situation (codified since 1972 in Germany) but which was no longer necessarily in tune with the development of the current sociological and socio-economic context;
- for Spain, it was interesting to identify the pedagogical and organisational consequences of setting up of a new system of vocational training based on a close link between schools and companies (LOGSE in 1990).

In addition to these scientific interests there are non-scientific concerns in particular institutional ones. The very establishment of our partnership illustrates that we have adopted at the same time a *rational logic* by choosing partners known in advance for their skills in the area to be examined and a *random approach* to the extent that some partners were chosen on the basis of declared interest or by political and institutional 'opportunity'. Austria had just joined the European Union and the presence of a group of Spanish employers added an institutional dimension in line with the wishes of the European contracting service. Furthermore, each one of us was interested in strengthening his position within the national and then international field.

We began with diverging interests in respect of form and content. To a certain extent, we did not choose an easy path: in the case of the scientific side to our work, we had to find a language shared by several disciplines: social sciences, economics, educational sciences, etc. Furthermore, beyond the linguistic and cultural barriers encountered in any transnational work, there were concrete differences in our approaches to reality: practitioners, scientific staff and politicians do not work on the basis of identical references, demands or timeframes. What was a major obstacle in the beginning nevertheless led to a rewarding exchange. To this end, the pilot project had to have a constant goal in mind: starting with these divergences, we had to produce a subject for common transnational research, taking us through various adoption phases by each partner, then confrontation phases before arriving at a new goal, by keeping the different compromises to the absolute minimum. As we move forward step by step, it was during the progress made in our project that we encountered and tackled these difficulties.

2. *Scientific and methodological difficulties*

In order to illustrate these issues, we will fall back on the case history and the conduct of our LEONARDO project, by endeavouring to identify and then debate the scientific and methodological difficulties encountered during this experiment.

Research results

Work began just under two years ago and is now in the final drafting phase. Our work led to the production of four monographs (one for each country) based on a common analytical grid and a synthesis of the overall work. Each national monograph was prepared by a national team, often interdisciplinary, based on a common analytical grid, proposed at the beginning of the project and re-examined jointly after six months of work. The transversal synthesis is based on three points, written by different teams on the basis of data from the monographs after joint discussion:- le contexte historique et socio-économique du tutorat des formations en alternance et du tutorat,

- the historical and socio-economic context of tutorship in alternance training and tutorship;
- tutorship practices in the company and training of tutors;

the recognition, acquired or in the course of being acquired, of the tutorship function.

- The progressive transformation in the subject of research, from its first formulation to its final form

During the different phases of the project, the subject 'tutors' underwent some changes:

- *before starting transnational work:* an initial formulation of the subject was proposed by the contractor. This reflected a national concern, adapted to the constraints of the contracting service and backed by the formal support of the partners for that subject. The initial project was accepted by the contracting service with some financial restrictions and led to changes;
- *during joint work*, each partner had first to take this project on board, to understand it, and to adapt it to his scientific and institutional interests. A first joint analytical grid had been submitted to each member on the basis of bilateral work between France and Germany. For the space of two years, a decision was taken to study the national situation during one year (production of a monograph for each country) then to compare these situations and to extract the elements of synthesis and questions for the second year. Nevertheless, in the course of time, the grid was modified to take into account national situations and supplementary studies were conducted. We now have a situation in which the comparisons are imbalanced between a block of three countries and a fourth.

- **To identify and expand the frontiers to a national conceptual framework,** all too often an implicit and unchallenged reference. For example, for the German team, it was difficult to see the tutorship function outside the highly formalized framework of initial training (dual system);

- for each national team, they had to have sufficient knowledge of the subject of research and its context in order to be able to input reflections on the construction and use of a common analytical framework. The partners supported the Spanish team for whom tutorship is a very recent reality, scarcely codified at all and relegated to a very small economic sector;

- for each partner, it was necessary to have sufficiently in-depth knowledge of the situation and context of other countries in order to be able to understand, 'to criticize', to follow the work of other teams and to be able to rapidly judge the common points and differences inherent in the subject of research.

We examined in the course of this study and analysis the usefulness and even the need for intercultural mediation undertaken by outside research partners. This mediation goes very much beyond the understanding and linguistic definition of terms. It is more a matter of explaining precisely the situation of each one in order to be able to have a rewarding discussion and bring about developments in the conceptual frameworks for reflection of each partner. In our case, this was CIRAC (Centre for Information and Research on Contemporary Germany) which was not a signatory partner for the LEONARDO project but whom we found to have in depth intercultural skills for understanding the historical French and German socio-economic context. Given its constant contacts with educational and economic situations in contemporary Germany, CIRAC gave us methodological support and also helped us in the orientation of the project and work on the synthesis of results.

However, it was only after several joint working sessions that the partners were able to identify and then extend the conceptual limits within which each one of them was involuntarily imprisoned.

- **To identify the levels and criteria for possible and pertinent comparisons** based on different research materials:

- the level of progress in tutorship practices from country to country led to an imbalance in research situations: between the almost complete lack of documentary sources in a country in which this is a new practice compared with an abundance of documents in countries in which it has been a subject for research for a long time, how are we supposed to find our way and produce a result which interests the scientific community?

- another practical difficulty is the choice of coherent statistical data based on category criteria which differ from one country to another (different age groups for example) in order to extract data and identify investigation areas which both reflect the national objectives and permit international comparison. Furthermore, we have to have detailed information about the collection of these statistical data and the extent to which they accurately reflect the situations before comparing them on a one to one basis.

- **To respect the sometimes differing requirements of the contracting service and scientific work**

Project work involves establishing a balance between the 'promises to the fund provider' (taking into account the desirable independence of research), the 'maintenance of scientific interest' in order to produce a result which comes close to the true subject of transnational research and the best possible compromise, taking into account the diversity of methodological approaches.

One example: we raised the question of the establishment of 'good foreign practices'. In the case of a LEONARDO survey and analysis, we have to respond to the political demand expressed by the representatives of the European Commission bearing in mind that it is not one of the tasks of research bodies. By contrast, it is possible to observe practices, to analyse their conditions for viability and transferability, to articulate where necessary work on studies with pilot projects closer to day to day action. But how can we reconcile these two positions?

In conclusion, some recommendations

In the light of our experience we feel that European comparative research projects must not underestimate:

- the setting up of a viable and reliable partnership which is dependent on stable research teams for a relatively short period;
- the importance and the time needed to compare national contexts and concepts;

- the usefulness of setting up partnerships outside scientific areas (intercultural aspects and project policies);
- the need for sound administrative and managerial principles which are indispensable to the production of scientific results.

Interaction between research staff and practitioners leads to rewarding cooperation but this is not a matter of course. It takes time to identify the different approaches used to identify the problems and to run the project. This means we have to be very ambitious about the resources to be made available for research but somewhat more modest about the results which can only constitute a small part of reality.

5 Vocational training and access to trades and professions: combining qualitative and quantitative research strategies

Hildegard Schaeper and Jens Zinn

When research into vocational training is conducted in the form of a transitional or sequential analysis, there are two different strategies available within the domain of life-course research. While biographical research relies primarily on qualitative methods, the main characteristic of sociological life-course research is the longitudinal quantitative nature of such studies. This essay examines the potential scope and the strengths of a multi-method research strategy on the basis of a model in which the collected structural statistics of a curriculum vitae are combined with qualitative interpretations and evaluations of those quantitative statistics.

1. Two paradigms: quantitative sequential research and qualitative biographical research

It is customary in Germany to regard the curriculum vitae as the objective side of a life history and the biography as its subjective side (cf. Kohli, 1978; Voges, 1987, and Meulemann, 1990). The CV can be described as the objective portrayal of a chronological series of events or a sequence of passages from one status to another, with profiles of each status, that result from the choices a person makes between institutionally determined alternatives. The biography, on the other hand, derives from the appraisal and processing of events in a person's life and takes the form of a subjectively interpreted and assembled life history.

In accordance with their specific research perspectives, sequential and biographical research are based on different research paradigms, each with its own set of methods. The sequential form of research, which a prominent exponent, Karl Ulrich Mayer, calls *Lebensverlaufsforschung*, i.e. research into the course of lives, is rooted in the tradition of a quantitative approach to the analysis of the social structure, an approach in which cumulative data are subjected to examination. This approach is characterised, for example, by the collection of representative samples, by the standardised retrospective or prospective surveying of people's life histories and by the use of procedures for the analysis of particular events (Mayer, 1987, pp. 54-55). Whereas sequential research pays scant attention to biographical interpretation, biographical research proceeds from the subjects' own perspective. Using qualitative methods, the researcher tries to obtain a holistic insight into social reality, seen as an interactively created structure; this insight should take account of the historical dimension and be primarily interpretative and perceptive (Kohli, 1981, p. 273, and Dausien, 1994, pp. 131-132).

Both approaches have their specific strengths and weaknesses. Quantitative processes can be used to define regular structures and patterns on a general representative level and to assess the scale and implications of key structural features. The price paid for this knowledge, however, is the abstraction of concrete social contexts and the simplification and diminution of the complexities of society. By contrast, the open approach of qualitative procedures makes it possible to describe in great detail the intricacies of social situations and experiences. With the aid of such an approach, the researcher is more likely to be able to understand subjective interpretation patterns and logical relations, to identify individuals' motives and to arrive at an understanding of the "typicities and mechanisms of the 'social construction of reality'" (Kardoff, 1991, p. 4). In qualitative research, the subject under examination is less rigidly restructured than in the quantitative approach, which — if researchers wish to avoid a methodological *octroi* — presupposes detailed prior knowledge of the dimensions of the theoretical constructs and of the aspects of the subject that are relevant to the questions under examination. It must also be said, however, that the qualitative approach does not permit projection and generalisation of the identified patterns and relationships.

2. *Combining quantitative and qualitative research: methodological suggestions*

For a long time the two paradigms seemed to be separated by an unbridgeable chasm, but now we are hearing increasingly frequent calls for quantitative and qualitative research to be linked in a way that will exploit the strengths of each, while offsetting the weaknesses. Current literature on research methodology does, however, present widely varying conceptions of the way in which the two strands of research can be intertwined in practice, and which functions devolve upon each in the framework of "methodological triangulation" (for details see Prein, Kelle and Kluge, 1993).

The "phased model" tends to predominate, especially in literature with a quantitative bias (cf. Mayntz, Holm and Hüber, 1969, p. 93, and Freidrichs, 1973, pp. 52-53, for example); the phased model, which may be seen as the classical model of methodological triangulation, was first mooted by Allen Barton and Paul Lazarsfeld (1955/1979). It assigns to qualitative research the task of exploring a research field and developing hypotheses. However, since this position denies the possibility that qualitative research can offer the required degree of validity, reliability and precision, it necessarily implies that quantitative research is the only suitable instrument to test the developed hypotheses and to project findings.

Contrasting with this idea of a hierarchical relationship between qualitative and quantitative methods, which ignores progress in the development of systematic and rational processes of methodologically controlled understanding of external factors, is the "convergence model", according to which the two types of research strategy co-exist on equal terms. On the assumption that various methods are able to grasp one single reality, methodological triangulation is expected to reduce distortions and to enhance the validity of research findings (Denzin, 1977).

The possibility of using a combination of methods to validate data and findings, however, is doubted by proponents of the "complementarity model". Since each method structures its subject in a specific way, the results of various types of examination are not seen as convergent, but as complementary. Methodological triangulation "can add range and depth, but not accuracy" (Fielding and Fielding, 1986, p. 33). It can be used, according to its methodological postulate — the implications of which, however, in terms of scientific theory, practical methodology and sociological content have scarcely been fully worked out (Prein, Kelle and Kluge, 1993, p. 19) — to select various aspects of social reality and build them together into a kaleidoscopic picture.

The criticism of which we have afforded mere glimpses should have been enough to make it clear that none of these three models can establish a claim to exclusivity (for details see Prein, Kelle and Kluge, 1993). In addition, research practice shows that the spectrum of fruitful and legitimate linking strategies is not limited to those approaches we have outlined above, and that not one of these approaches can satisfy all the requirements of empirical social research and solve its problems. The development of new methodological approaches should not therefore be solely dependent on epistemological reflection, but should be rooted in research practice and should reconstruct such practice in a rational manner. "The advancement of research procedure in social science as elsewhere depends on *making explicit* what researchers actually do, and *systematically analysing* it in the light of logic and substantive knowledge." (Barton and Lazarsfeld, 1955/1979, pp. 321/41).

From this perspective, we shall present some examples from our research practice in the following sections to illustrate the wealth of potential functions, the productiveness and the practical implementation of methodological triangulation.

3. *Linking quantitative and qualitative research: examples from research practice*

All of the examples described in this section are from our research programme on the transition to employment (*Statuspassagen in die Erwerbstätigkeit*), which comes under special research area 186, devoted to transitions and risks in the course of people's lives (*Statuspassagen und Risiken im Lebensverlauf*), at the University of Bremen [137]. The study is designed as a longitudinal quantitative and qualitative examination of the career patterns and family processes of a cohort of young adults (1989 apprentices' examination) in six occupations that require training (bank clerk, office clerk, engine fitter, vehicle mechanic, hairdresser and retail salesman/saleswoman) and in two employment areas (Bremen and Munich). The selection of the occupations and employment areas takes account of the way in which the opportunities structure differs from one occupation and from one area to another; the inclusion of typically male, typically female and mixed occupations serves as a means of examining the structural category of gender as a key factor in the perpetuation of social inequality.

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[137] The project team comprises Walter R. Heinz (leader), Thomas Kühn, Hildegard Schaeper, Andreas Witzel and Jens Zinn.

The first phase of the survey of the quantitative sample (macrosample) took place in 1989, shortly before the completion of vocational training (sample size 2 230). Two more phases, using standardised questionnaires, were carried out in 1991 and 1994 with 1 040 respondents. A fourth and final phase (sample size 980) is nearing completion. While sociodemographic information, data on career patterns and — in the fourth survey — data on processes related to starting a family were collected from the macrosample, a parallel qualitative sample (microsample) enabled the researchers to obtain ethnographic descriptions of occupational cultures and to determine the role of personal motivation in career patterns. To that end, a series of "problem-centred interviews" (Witzel, 1982 and 1985) was organised at roughly the same time as the canvassing of the macrosample, with 198 interviews being conducted in the first round and 93 in the third and last round. The members of the microsample were selected on the basis of a special procedure, which we now intend to outline as a first example of how quantitative and qualitative research can complement each other.

3.1 The selection of a qualitative sample from a quantitative survey

If it is accepted that rational and methodical checking of sample collection has a key function in qualitative as well as in quantitative research, it follows that qualitative researchers should devote particular attention to the question of sample checking.

In order to solve the problem of sampling in qualitative research, Barney Glaser and Anselm Strauss (1967) developed the concept of "theoretical sampling". "Theoretical sampling" means that the sample is not established from the outset, but rather that sampling is a process in which data analysis and data collection alternate. On the basis of a thorough analysis of cases that have already been collected, further cases are selected and analysed until the concepts and categories developed from the original material have reached the "theoretical saturation point", in other words "until no additional data are being found whereby the sociologist can develop properties of the category" (Glaser and Strauss, 1967, p. 61).

In view of the shortage of time and financial resources, theoretical sampling is not, however, always feasible. In such a situation, another theory-led selection strategy is available which defines the size of the sample and the selection criteria *a priori* on the basis of theoretical considerations and/or empirical findings. In order to guarantee that the relevant combinations of properties are represented in the selection, the quantitative sample can then be used to collect a proportionately or disproportionately stratified qualitative sample. The quantitative sample thus has the function of an "optimum seeding system" (Küchler, 1983, p. 26) for the qualitative selection.

It is in precisely this way that we used the data from our macrosample to determine the selection criteria and to choose the participants in our qualitative study. In accordance with our theoretical approach, which is designed to combine structure and behaviour, our selection criteria comprised on the one hand a sociological structural variable which is known or presumed to be significant in terms of vocational development; on the other hand, in pursuit of our aim of "theoretical saturation", we also had to consider any interesting, contrasting or extreme cases. The individual selection criteria were based on the following factors (cf. Mönnich and Witzel, 1994, p. 226):

- structural influences on the transition from vocational training to employment (area, occupation, gender);
- various aspects of transition from school to vocational training (direct or delayed transition, qualification level, transitional stages (national service, unemployment, etc.));
- offers of work from training companies; and
- interesting, contrasting and extreme cases (e.g. a former female student in the vehicle mechanics' trade, a pupil at a non-academic secondary school going on to become a bank clerk).

For each occupation about 30 interviewees were selected, divided equally between the Bremen and Munich areas. Care was also taken to ensure that young people who had gone straight into vocational training from school and those who had not were represented in equal numbers. Among the former group, we tried to ensure wherever possible that all types of school qualification were represented; among the latter group, we looked for a broad variety of experiences between school and vocational training.

Because of the particular composition of our sample, we were able to study how the young adults describe, perceive and interpret objective opportunity structures, which aspirations they develop in specific living and working conditions and which means they employ to achieve their goals. This information about the young people's subjective outlook which was gleaned from the qualitative interviews turned out to be a very useful aid to understanding and interpreting the substance of the findings we obtained from the quantitative study, to discovering previously unobserved heterogeneity and explaining previously inexplicable variance.

3.2 The use of qualitative material to explain transitional and sequential patterns

Our quantitative sequential analyses reveal distinct differences among the career patterns of the young adults in the six occupational categories. Office clerks, for example, largely remain in occupations to which their training closely relates; in all the other occupational groups, on the other hand, there is a strong tendency for employees to leave the occupation for which they were trained, albeit with varying aims. Whereas few vehicle mechanics and hairdressers try to obtain additional educational qualifications — further training opportunities being quite rare in their occupations — bank clerks and machine fitters have a relatively high propensity to continue their educational development. Bank clerks frequently begin a university or college course shortly after completing their vocational training; a large percentage of machine fitters, on the other hand, begin by catching up on their missing school qualifications with a view to subsequent studies.

These differences can partly be explained by reference to the sociodemographic characteristics of the respondents and the prevailing labour-market conditions in particular occupational fields. The large percentage of bank clerks who enrol at universities and colleges, for example, can be traced back to their relatively high levels of educational attainment — more than half of all bank clerks have passed their *Abitur*, the German university entrance qualification. The observation that many hairdressers leave the trade but that few of them continue their education may have to do with poor job opportunities, stressful working conditions, inferior school qualifications and/or the gender factor.

These factors, however, can only go part of the way towards explaining the variations in career patterns. Moreover, such "explanations" remain superficial and unsatisfactory, since they say nothing about the mechanisms by which statistical trends are created. Although sociological theories such as socialisation, decision and normative theories offer "depth explanations", these are not infrequently at odds with each other and are not infrequently resorted to *ex post facto*, with the result that the assertions emerging from them cannot be underpinned with empirical data.[138] Sociological factors, after all, are sometimes of little help when unexpected findings emerge: machine fitters, for example, have relatively good, albeit deteriorating, career opportunities. Unlike bank clerks, however, the overwhelming majority of machine fitters (90%) are not qualified to enter higher education. Nevertheless, a remarkably high percentage of them (one in four) are prepared to go out of their way, at the cost of strenuous and time-consuming effort, to achieve the aim of studying at a university or college. Why certain machine fitters choose to pursue that aim can scarcely be understood on the basis of general sociological theories. Such understanding depends on further information about the specific factors that influence the actions of these individuals in the "social realm" and about their subjective viewpoints.

With the aid of our qualitative interviews, we managed to forge the missing link btween the autonomous variable of occupation and the dependent variable of career pattern. To that end, the qualitative material and interviews with experts were used to obtain background knowledge about occupational cultures and the actual conditions in which the various occupations are pursued. This analysis revealed that the trade of machine fitter is one of the most prestigious trades in the technical and industrial sector and that machine-fitter training places great emphasis on skilled work. These conditions create a socialisation climate which encourages the development of high vocational ambitions. Once their apprenticeship was over, however, the everyday working lives of the machine fitters were far from conducive to the fulfilment of these ambitions. The available jobs seldom matched their vocational expectations or their formal qualifications; they were often little different to unskilled work or to tasks that could easily be learned on the job. Consequently, a large percentage of these young specialists were unhappy with their occupational situation and tried to achieve their high vocational goals by investing in further education. The "wet blanket" cast over their professional expectations, however, did not induce every disenchanted machine fitter to resume his or her educational development. In order to be able to understand the reasons underlying these different responses to the same situation, we then assessed the interviews in terms of the individuals' motivation and strategies.

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[138] The problem is even more complex than that. As Udo Kelle and Christian Lüdemann (1995) demonstrate, general theories on which depth explanations depend often do not allow conclusions to be drawn from the observed circumstances. The gap between general theoretical assumptions and concepts on the one hand and empirical phenomena on the other then has to be bridged by means of additional assumptions with a high degree of empirical substance ("bridging assumptions").

In conformity with the "grounded theory" method, an "axial coding model" (Heinz *et al.*, 1998; Strauss and Corbin, 1990, pp. 96 *et seq.*; Witzel, 1996) was developed, on the basis of which each vocational stage in the respondent's biography was analysed and categorised with regard to three main aspects:

1. Which *aspirations*, i.e. interests, aims and preferences, are associated with the passage from one occupational status to another?

2. How do individuals translate these aspirations into actions, i.e. how are these aspirations *fulfilled*?

3. How do the respondents *appraise their progress* at the time of the interview, i.e. how do they assess the consequences of their decisions and actions?

The comparison of these aspirations, their fulfilment and the respondents' appraisal of their situation at all stages of their vocational biographies shows that behind decision-making processes and strategies in specific situations are hidden typical patterns of occupational preferences and behaviour, which we term *berufsbiographische Gestaltungsmodi (BGM)*, i.e. ways of shaping vocational biographies (cf. Heinz *et al.*, 1998; Kühn and Zinn, 1998; Witzel, 1996). On the basis of a systematic case comparison, six different modes are discernible: identification with a company, optimisation of career prospects, career planning, wage slavery, personal development and a spirit of enterprise. To explain the differences in the career decisions of the machine fitters, however, it will suffice to deal in more detail with the career-optimisation and wage-slavery modes [139].

Young adults whose vocational biographies are determined by their propensity to optimise their career prospects regard work as a central element in their lives from which they expect to derive the opportunity for self-fulfilment and professional advancement, broad freedom of action and creativity, a responsible position and constant new challenges. In order to attain these goals, they endeavour to develop the widest possible range of skills and to keep the maximum number of career options open for as long as possible. In an occupational context marked by routine tasks and limited career prospects, this disposition leads those who possess it to realign their vocational biographies and return to the education system.

The opposite applies to those machine fitters who can be described as having a propensity for wage slavery. These young adults regard work solely as a necessary means of replenishing and increasing their material assets. Neither the substance of their activity nor their career prospects are used as yardsticks of their professional situation, but rather job security, working conditions and, above all, earned income. For those with a disposition to wage slavery, it is important that the financial rewards are in due proportion to the amount of work put in and the stress endured. For a good income they are even prepared to perform tasks for which they are overqualified (e.g. assembly-line work).

While these examples show how important, or indeed indispensable, qualitative research can be to the substantive interpretation of the results of statistical analyses — in short, to the "qualification" of quantitative findings — the next subsection deals with the opposite process, namely the quantification of qualitative results.

3.3 Quantification of qualitative findings

As was mentioned above, qualitative methods prove most effective wherever it is a matter of providing a "close-up" view of cultures, social milieux and social behaviour or a question of interpretation patterns, making sense of data and establishing the mo-

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[139] A more detailed description of all six *berufsbiographische Gestaltungsmodi* can be found in Heinz *et al.* (1998, pp. 95 *et seq.*) and in Kühn and Zinn (1998, pp. 72 *et seq.*).

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tives underlying behaviour patterns. If we characterise this domain as a particular target of interpretative research, however, this does not mean that we are postulating an inviolable division of functions for all studies and totally excluding quantitative research from the range of suitable strategies with which to examine these aspects of society. If this position is accepted, the way will then be clear to quantify qualitative diagnoses with the aid of standardised statistical processes.

In our research project, biographical motivating factors are regarded as an important mediating agent between social structures and institutions (e.g. occupation, labour market, education system, social origin, gender) on the one hand and individual family and career decisions on the other. Since biographical motivation is determined to some extent by socialisation processes related to work, school, origin and gender, it is not surprising that, in our qualitative material, we are also able to observe a job-specific and gender-specific distribution of the various ways of shaping vocational biographies (Heinz *et al.*, 1998, pp. 96 *et seq.*; Kühn and Zinn, 1998, pp. 73 *et seq.*)[140]: in the case of bank clerks, the dominant modes are optimisation of career prospects and career planning. The propensity for identification with a company is strongest among hairdressers, while the wage-slavery mode is most marked among vehicle mechanics. At the same time, identification with a company seems to be a particularly female motivating factor, 90% of those who operate in that mode being women, while the propensity for wage slavery seems to be a particularly male characteristic, since 80% of the identified "wage slaves" are men (Heinz *et al.*, 1998, p. 98; Kühn and Zinn, 1998, p. 76). There are also indications that men are somewhat more promotion-minded than women.

Because of the small number of cases in the qualitative sample, however, the numerical findings cannot be projected. Nor is it possible to distinguish the relationships that emerge in the qualitative material between certain determinant modes on the one hand and gender and occupation on the other or — to put it in less technical terms — to identify the conditions in which particular motivating factors are developed. That is why we are trying, in the fourth surveying phase of our longitudinal quantitative study, to measure biographical determination patterns. Provided this attempt succeeds, we shall obtain more precise information about the distribution of the determinant modes and their links with structural variables and shall be able to examine in greater detail our assumption that biographical motivating factors act as mediating agents between structures/institutions and actual behaviour patterns.

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[140] The presentation of qualitative research findings often contains a more or less explicit numerical line of argument. "It is a perspective that persons in modern society cannot bracket away." (Fielding and Fielding, 1986, p. 15).

3.4 Structure of the questionnaires

As indicated above, quantitative surveying instruments presuppose detailed knowledge of the subject under examination. If we want to develop a standardised questionnaire that will elicit answers to the research question, we must be aware of the dimensions of the theoretical constructs, the precise boundary between relevant and irrelevant data and the meanings that the respondents will attach to the vocabulary and phraseology of the questionnaire. If this prior knowledge is unavailable or not available in full, qualitative research — in conjunction with other sources — is an excellent basis on which to explore the field of study, to translate the key concepts into the language of everyday reality and to define phenomena from the cultural context in which the respondents live and move.

We based our own qualitative evaluations on this dimensional analysis and on the establishment of a means of recognising the six identified ways in which individuals tend to shape their vocational biographies. With the aid of this approach, we were able to identify the following dimensions (cf. Kühn and Zinn, 1998, pp. 71 *et seq.*):

1. *Work* (working conditions, the subjective importance of work, the nature of the work performed by individuals),
2. *Qualification* (motivation and actions relating to the acquisition of qualifications),
3. *Career* (subjective importance of insecurity/security of career prospects, open-ended/closed nature of professional development, promotion opportunities),
4. *Income* (importance of income as a determinant factor in career choices), and

5. *The company* (social atmosphere, responsibilities and position in the company hierarchy).

By resorting to established and tested scales for the measurement of attitudes to work and aspirations, we tried to cover all of these dimensions. In addition, we developed other questions and response categories designed to take account of the specific features of our approach and of the female view of work and employment. For example, Birgit Geissler and Mechthild Oechsle (1996) identified social integration and structuring as functions of work that are typically emphasised by women. Since these functions are not confined to social relations in the workplace, we formulated statements such as "People who do not go out to work are in danger of becoming socially isolated" or "The most important thing to me about working is that it makes me financially independent". To ensure that the personal-development mode [141] was properly represented, the categories "to further my personal development", "to broaden my horizons" and "simply to learn something new/for the pleasure of learning" have been added to the list of reasons and motives for undergoing further training which the respondents are asked to rank in order of importance.

The way in which we have approached the second focal point of our study, namely the process of starting a family, is also based to a great extent on the evaluations of our qualitative material. Our first step involved distinguishing the substance of the interviews on the basis of a simple classification system into the following categories: parenthood, partnership, marriage, social networks, social norms, stopping work and going back to work. This initial analysis resulted in a comprehensive description of the various categories and covered a wide range of topics that had been addressed in the interviews. The second step was to refine the categorisation system by developing dimensions and subdimensions on the basis of case comparisons derived from the respondents' statements. Within the parenthood category, for instance, we were able to distinguish between the dimensions "reasons for parenthood" (including various subdimensions), "timing of parenthood" (containing subdimensions such as "personal maturity") and "-remoteness from parenthood" (also comprising various subdimensions).

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[141] A description of this determinant mode can be found in Kühn and Zinn, 1998, p. 72

Besides devising the categorisation system, we used the qualitative material and relevant literature to develop hypotheses on the determinants of family-based decisions and personal ambitions (e.g. job or promotion prospects, working conditions, career development, motives relating to vocational biographies and family interests, social support, professional aspirations of one's partner, conjugal division of labour and childhood experiences). These hypotheses led us to identify additional considerations that are relevant to the research question. The two things together — the categorisation system and the hypotheses — then formed the basis on which we drafted our questionnaire.

Conclusion

The examples presented from the context of our project are only a few of the many ways in which qualitative and quantitative research can be combined. And they represent only some of the functions that a triangulation of methods can perform. Christian Erzberger (1995), for example, shows how contradictory research findings can be used to modify theoretical assumptions. Gerald Prein, Udo Kelle and Susann Kluge (1993, p. 29) report on the possibility of using quantitative research findings to check the validity of qualitative data and to uncover systematic distortions. Hildegard Schaeper (1997, p. 18) illustrates the importance of the role played by qualitative research in the validation of quantitative data. And last, but not least, John Bynner (in the present volume; see also Bynner and Chisholm (due to appear soon)), emphasises the high degree to which comparative intercultural research depends on qualitative approaches when it comes to tackling the problem of equivalence.

Qualitative and quantitative methods each have their own strengths and weaknesses, and their suitability varies from one subject of enquiry and from one information target to another. That, however, is no basis for either a fixed, inviolable division of responsibilities or a definitive model of methodological integration. How and for which purposes methodological triangulation can be used will ultimately depend on the theoretical assumptions, the question under examination and the way in which the research is designed.

Our research experiences in the framework of our project demonstrate how important it is to draw upon research practice in the development of methodological strategies.

Non-empirical methodology can all too easily result in a "bead-stringing exercise" that has little in common with proper research practice. Like Allen Barton and Paul Lazarsfeld (1955/1979) and like Gerald Prein, Udo Kelle and Susann Kluge (1993, pp. 20 *et seq.*), we consider the rational reconstruction of the practices used by researchers to be an important aid to the formulation of methodological strategies. But such forms of "reconstructed logic" (Kaplan, 1964) are more than a mere description of the research process. In actual fact they focus on *models* and *theories* relating to the way in which scientists arrive at rational conclusions.

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Comparative Vocation Training Research: Networks and the use of electronic Information and Communication Technologies

1 FORUM for European Vocational Education and Training Research (VET-Research)

Kuhn, Michael [142]

Introduction

Originally, the FORUM has been founded in spring 1995 during a meeting of several researchers on VET, who were not only seeking a platform for a continuous collaboration over the lifetime of European funded projects, but who also had the feeling, that a European concept of research on VET would be needed and ought to be developed.

The FORUM for European Research on Vocational Education and Training is since March 1998 a 4th Framework Research Programme- (TSER-) funded thematic network Due to a successful application under the TSER Programme managed by the European Commission (Generaldirektion 12, Wissenschaft und Forschung), the FORUM has become a EU-funded network.

It has now 23 VET research partners coming from all European Union Member States except Luxembourg. Most of them are participating in a specific TSER-project but not all of them: 5 are actually not funded under the European Union's Research Programme (see list of partners under chapter VI).

One of the major aims of the FORUM is - due to rather different VET-Research traditions and cultures - to enable an increased mutual learning process of VET researchers within Europe. To achieve this goal, the FORUM's main activity is to organise each year three workshops focused on specific research issues.

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II. The internationalisation of research issues in Europe

The growing consciousness that occupational skills and competencies as an important economic factor, VET policy, the contents of occupational skills and the way by which occupational teaching and learning is organised are being increasingly determined by economic conditions and contexts. As a result of the continuing innovation processes, as well as the global changes in business, the current reforms of VET are dominated by the globalisation and internationalisation in all its relevant elements.

Through this categorisation as mainly a economic factor and under the influence of a primarily economically determined development VET research itself has increasingly to take into account such globalised research perspectives.

In addition to the increasing trans-national perspective of VET research, required by the process of (economic) globalisation and its impact on occupational skills, it has to be recalled that the shift from a national to a transnational research concept is even more evident in Europe within its process of political integration, striving for a European Society, as it has been stated in a draft version of the European Commission services of the forthcoming 5th framework research programme.

III. The FORUM's contribution towards a 'European VET research culture'

The biggest difficulty for a further development of a trans-national or European VET research concept is linked to the fact that VET research is traditionally a highly application-orientated and practical science. As a consequence VET theory has always been strongly connected with VET practice. This concerns for instance the roots of its patterns of thinking in national or even in regional VET systems and cultures.

The generation of a transnational concept for VET research seems almost to be comparable with the generation of a new research discipline: Through its practical orientation emphasised in action research approaches VET research must keep close links with the different national VET systems and VET cultures. Thus, the patterns of thinking and of VET theory will necessarily keep their national and cultural specific roots.

On the other hand, VET research must also open its ideas towards the international challenges facing the different systems, which will certainly be reinforced through the skills demands for the emerging European citizen. This in fact requires a theoretical approach, which overcomes the national and cultural perspectives.

The challenge for a European VET research concept is to develop a transnational research culture, in which it keeps and even fosters its different systemic and cultural patterns of thinking and in same time it develops cross-cultural research perspectives which permit to meet European dimensions.

A central issue for the development of a transnational VET research concept is the shift of its patterns of thinking towards the integration of national specific and broader European perspectives and the development of respective research methodologies, approaches and hypotheses responding to the needs of an increased European integration of labour and skill/competence 'markets', employment and education/training systems, cultures and traditions.

The state of the European integration requires to overcome former concepts of transnational research, contemplative comparison of the differences, juxtapositions of policy interventions etc. It requires new concepts of trans-national VET research, which consider VET problems as challenges for a mutual endeavour, in which the analyses of different systems and cultures are serving as important sources for innovation and renewal of whole or parts of (national) systems.

Due to the globally acting economies all VET systems involved in the global economy have to find answers on similar questions, single countries might respond with their singular VET concept; VET-research in Europe, however, with its different VET environments and its communality must generate common concepts even if the specific answers may be different in each country or region.

There is a crucial need to promote a dialogue between different academic traditions and disciplines as well as different European research cultures in order to improve the understanding of the specific development of European vocational education and training and to contribute to the development of a 'European path' in VET in a social organisation of innovation.

The formation of the Forum for European Research in Vocational Education, Training and Learning is intended as a step towards the founding of such a new multi-cultural and interdisciplinary academic community, focused at VET-Research.

IV. Tasks of the Forum

The Forum aims to promote mutual learning of European researchers in VET mainly through the organisation of workshops. The Forum will gather researchers from different traditions, disciplines and cultures with the aim of defining and exploring a European dimension for VET.

The Forum will contribute to the dissemination of results of existing research and projects with a : particular focus on work being undertaken within the various European Community action and research programmes in the field of education and training. An important task will be its role to link in with different networks of researchers and practitioners in order to reflect and exchange on the cultural diversity and heritage of national systems and practice.

Such a tool for collaboration can develop some strength for a European organisation of innovation through the integration and exchange of different cultures. The establishment of a transnational research community and the identification of a European dimension in VET is an important issue for the coming years.

In addition, the FORUM will contribute to the coaching and development of young researchers in the framework of its network's work. Young males (<30 years) and young females (<35 years) will work alongside more experienced colleagues.

These innovations will ensure that the FORUM delivers an important contribution to the development of a VET-Research Community on a European scale..

Annexe: FORUM workshop activities and list of members (partners)

To make a step forward in achieving these goals the Forum will be carrying through a series of workshops, three per year, presumably on the following themes:

1 Bridging gaps between global challenges and national research approaches

2 Contributing to the development of a trans-national research approach in VET

3 Finding a European path for VET between divergence and convergence

4 Trans-national research methodologies

5 Discovering cultural diversities as a source of innovations

6 Developing a European dimension: towards a European research community in VET

7 European VET-Research cultures

8 Dissemination of VET research results in Europe

9 Co-operation between VET research and VET practice

10 Coaching and promoting young VET-Researchers

The following workshops have already been planned in more detail

Workshop 1: Cultural Values and Meanings

- Concepts of the interrelations of work and knowledge in different VET-cultures in Europe
- Emergence of different concepts of national politics and national concepts of VET in European countries
- Technology, education/training and work-organisation as a base for different VET-cultures in European states

Workshop 2: Cultural Values and Meanings

- A European identity of VET in a globalised world
- A model for the development of a European VET-culture
- Cornerstones of a European path between unification and regionalisation

Workshop 3: VET and labour market interactions

- Research traditions in labour market policies corresponding with VET research
- Determinations of labour market demands and VET supplies
- Models to relate labour market and VET in different European concepts of VET in Europe

Workshop 4: VET and labour market interactions

- New concepts to interrelate labour markets and VET in Europe
- European, national and regional dimensions in VET and labour market
- Future research tasks for a labour market orientated VET approach
- The concept of VET as a regional innovation agency

Workshop 5: Changing VET Institutions

- Training policies of enterprises and responsiveness of VET facilities
- Employers involvement in VET
- Cultural determinants of curricular aspects referring to the interrelations of work and learning

Workshop 6: Changing VET Institutions

- European organisation concepts for work-related training facilities
- Milestones for a work-related curriculum
- Transfer strategies for the implementation of new organisational concepts

Workshop 7: Identities: Formation of occupational identities as a part of the broader process of identity formation

- Concepts of VET and their impact on SWT in Europe
- Models of the transition of academic to occupational knowledge
- Models of the transition of personal development to occupational identity

Workshop 8 : Identities: Formation of occupational identities as a part of the broader process of identity formation

- Facilitation of SWT and organisational requirements
- Concepts to transfer of individual development to occupational identity
- Key elements of a European concept for the transition of academic to occupational knowledge
- Requirements for the professionalisation of key actors to coach SWT

Workshop 9 : Learning in Learning Organisations

- European models of HRD and the involvement of continuing training
- Occupational knowledge as an innovation factor
- Concepts of occupational knowledge and LO[143]
- Best practise models of LO

FORUM members-partners as of summer 1998

1. Michael Kelleher, ECLO, European Consortium for the Learning Organisation, Belgium

2. Loek Nieuwenhuis, STOAS, Stichting voor Onderzoek aan Agraarsector, Department for Studies on Education Employment, Netherlands

3. Jack Horgan, FAS, Training and Education Authority, Ireland

4. Eduardo Figueira, Uni EVORA Centro de Investigacao e Desinvolvimento para as Ciencias, Portugal

5. Jenny Hughes, CRED, Centre for Research and Education Development, United Kingdom

6. Per-Eric Ellström, CMTO, Centre for Studies on Humans Technology and Organisation, Sweden

7. Massimo Tomassini, ISFOL, Instituto per lo Sviluppo della Formazione Professionale dei Lavoratori, Italy

8. Lorenz Lassnig, IHS, Institut für Höhere Studien, Austria

9. Florentino Blazquez Entonado, ICE, Uni ExtremaduraInstituto de Ciencias de la Education de la Universidad de Extremadura, Spain

10. Nikitas Patiniotis, University of Patras Laboratory on Sociology and Education, Greece

11. Agnes Dietzen, BIBB, Bundesinstitut für Berufsbildung, Germany

12. Alan Brown, Institute for Employment Research University of Warwick, United Kingdom

13. Robert-Jan Simons, Universiteit Nijmegen/Vakgroep Department of Educational Sciences

Netherland

14. Mia Douterlunge, HIVA, Hoger Instituut voor Arbeid, Belgium

15. Sophia Spliotopoulu, IDEC, Industrial Development and Education Centre, Greece

16. Anja Heikkinen, UTA, Tampereen yliopisto/Kasvatustieteiden laitos, Department of Education, University of Tampere, Finland

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[143] LO: Learning organisation

17. Hanna Shapiro, DTI,Dansk Teknologisk Institut, Denmark

18. Michael Kuhn, ITB, Institut Technik & Bildung, Germany

19. Graham Attwell, ITB, Institut Technik & Bildung, Germany

20. Gerald Heidegger, BIAT, Universität Flensburg, Germany *

21. Peter de Boer, Institute for Educational Research, University of Groningen, the Netherlands*

22. Jitte Brandsma, University of Twente, the Netherlands*

23. Benedicte Gendron, Laboratore d'Economie Sociale, University of Paris, France*

If readers want to have more information about the FORUM contact any of the listed FORUM partners. And if somebody wants to visit our workshops, to make a presentation, to write a dissemination paper or even to join the network, everybody, who is interested in European VET-research is welcome.

*Partners which actually do not get TSER- funding

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Cf. *Adick*, Christel: Die Universalisierung der modernen Schule. Eine theoretische Problemskizze zur Erklärung der weltweiten Verbreitung der modernen Schule in den letzten 200 Jahren mit Fallstudien aus Westafrika (The Universalization of the Modern School. A Theoretical Outline of Problems to explain the World-wide Spread of the Modern School in the last 200 years, with case-studies from West Africa). Paderborn: Schöningh 1992, pp. 103-125.

Cf. *Schriewer*, Jürgen: Funktionssymbiosen von Überschneidungsbereichen. Systemtheoretische Konstrukte in vergleichender Erziehungsforschung (Function Symbioses of Overlapping Ranges. System-theoretical Constructs in Comparative Educational Research). In: *Oelkers*, Jürgen and *Tenorth*, Elmar (Eds.): Pädagogik, Erziehungswissenschaft und Systemtheorie (Pedagogics, Education and System Theory). Weinheim/Basel: Beltz 1987, pp. 76-101. - *Schriewer*, Jürgen and *Holmes*, Brian (Eds.): Theories and Methods in Comparative Education. Frankfurt/Main: Lang 1988.

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2 Latin American and Caribbean Network for Information, Research and Management of Vocational Training

Klaus Przyklenk

- CinterNet -

What is CinterNet?

CinterNet is a network for co-operation and exchange of information in the area of vocational training (VT), organised and managed from Cinterfor/ILO.

Its work rationale rests on the co-ordination of existing resources placing them at the service of common objectives, through the decentralised implementation of its diverse activities. In that manner, the institutions and organisations that become linked to each

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other through CinterNet are at the same time users and suppliers of information and services, which constitute the raw material of the network.

In response to the new challenges faced by vocational training in Latin America and the Caribbean, CinterNet has been established as a space to encourage innovation, both regarding instruments and media, methodologies and co-operation and the exchange of information among the different actors in regional VT.

CinterNet is a Cinterfor/ILO initiative developed with the co-operation of all bodies connected with the Centre. For its implementation, it has the financial and technical support of the Ministry for Economic Co-operation and Development of Germany (BMZ) through Project RLA/95/M06/FRG.

Who make up CinterNet?

All vocational Training Institutions, Labour Ministries and employers' and workers' organisations connected with Cinterfor/ILO are automatically included in CinterNet, which is a new space for implementing the technical co-operation and services that the Centre endeavours to offer in a wider, more flexible and efficient manner to meet the manifold and various requirements in this respect.

But CinterNet also aims at enlarging the scope and number of participating agents. Universities, private training institutes, enterprises and international co-operation organisations are some of its new members; their contribution is considered essential for regional VT.

How to join CinterNet

CinterNet provides several areas to implement co-operation and the exchange of information among participating entities and organisations.

- RESEARCH AREA
- AREA FOR TRAINING IN VT MANAGEMENT
- CO-OPERATION NETWORKS
- VIRTUAL VT SUPERMARKET

- INFORMATION AND COMMUNICATION SERVICES

Research

There is an area in CinterNet devoted to applied VT research. The problems of lack of dissemination of results of research in the VT area, scant communication among researchers, the duplication of efforts in the task of generating and accumulating theoretical and applied knowledge, have all been frequently underlined by those who work in this field.

CinterNet innovates about the way in which research activities are carried out and tries to correct situations of that kind. The new communications technologies are an invaluable tool that must be incorporated and developed.

The research activities promoted by CinterNet are based on international and interinstitutional co-operation schemes; they deal with innovative aspects, use new methodologies and tools and are aimed at the development of products and services for the management of vocational training.

Activities foreseen include the following:

. Methodologies for the follow-up of graduates from youth training and employment programmes: this is an offshoot of a collaboration agreement between CinterNet and the PROJOVEN Project of the Ministry of Labour and social Security and the National Youth Institute of Uruguay.

. Ongoing study of Latin American experiences in certification and training based on occupational competence standards.

Proposal submitted at the Technical Meeting on „Information and co-operation strategies in the development of certification and training systems based on occupational competence standards“, held at Queretaro, Mexico from 3 to 4 December 1997, jointly organised by CONOCER of Mexico and CinterNet.

. Integration of environment management into training curricula

To be implemented through a co-operation agreement with the Brazilian SENAI and other organisations interested in the matter.

. Competencies profile of directors of vocational training centres and institutions

This activity is part of a process of development of teaching aids for VT directors.

Training for VT Management

CinterNet is a space for strengthening VT management capacities. Both the directors of training centres and the principals of VT institutions must have a number of competencies, many of which can be transmitted through training activities. However, directors and principals are people who do not have much time to attend courses, or at least require flexible timetables and media. Based on a competencies profile of directors of vocational training, CinterNet endeavours to develop teaching packages and courses with a strong emphasis on multimedia, interactive and remote instruments.

The following are some initial activities:

Conceptualisation of the training course for VT directors developed by the HEART/NTA of Jamaica for its subregional application (to the English-speaking Caribbean)

The HEART/NTA, which governs vocational training in Jamaica, has developed a programme for the training of directors of training centres Three main stages have been envisaged: (a) application of the programme to HEART/NTA's own directors; (b) application of the programme to the directors of Jamaican bodies not dependent on HEART/NTA; (c) extension of the programme to other English-speaking Caribbean countries.

Stages (a) and (b) have already been successfully implemented. At present HEART/NTA is in the process of signing an agreement with Project RLA/95/M06/FRG whereby technical assistance will be provided to redesign the programme for application in other English-speaking Caribbean nations.

Course about the use of the Internet in vocational training institutions, developed by the INATEC of Nicaragua.

Within the framework of an agreement subscribed by INATEC and CinterNet, the Nicaraguan training body delivered a presidential course on „The use of the Internet in Vocational Training Institutions", during the first week of December. It was attended by 2 representatives from each one of the VTIs of the subregion comprising the Central American Isthmus, the Dominican Republic, Haiti and Jamaica and jointly financed by CinterNet, INATEC and the participating VTIs themselves. The course will also be available at the INATEC Web Site, and it will be possible to download its different modules through CinterNet.Through the same mechanism, INATEC will also offer to CinterNet the modules of its Teachers' Training Programme.

Development of teaching resources for the training of VT directors.

On the basis of different experiences gathered in the region and elsewhere, CinterNet will try to evolve a basic curriculum (based on competencies) for VT directors, on at least two levels: heads of training centres and principals of vocational training institutions. This will lead to a training manual and programme that will be offered to directors through virtual media like the Internet and CD-Rom.

Co-operation Networks

CinterNet promotes the setting up of networks according to specific interests. For instance, the Central American Isthmus, the Dominican Republic, Haiti and Jamaica are in the process of establishing a subregional network to encourage and upgrade exchange and co-operation among themselves (see box). This space is likewise open for the setting up of other networks on the basis of subject or sectoral interests.

VT Services and Products' Supermarket

This is a space where CinterNet participants can place and offer their products and services. It makes it possible for users - through the Cinternet Web- to have access to items provided by organisations, such as teaching materials, databases, information on events, etc. Rather than the typical link between one Web Site and another, the idea is that entities should develop and place Webs specially designed for a space of this kind.

New Information Services

CinterNet is constantly promoting the generation of new information services for all its members.

- Database of VT experts.
- Database of vocational training events.
- Virtual publications.
- Database of youth training and employment programmes.
- Virtual conferencing.
- Virtual vocational training café.
- Study of VT systems in Latin America and the Caribbean with interactive presentations on CD-ROM and the Web.

Database of VT Experts

This database, which will be available in February 1998, will provide a mechanism both to search for experts on the basis of various descriptors, and to provide employment opportunities for those experts. Data will be fed into it in a decentralised manner, insofar as it will be up to the experts themselves to supply their personal information. CinterNet will set up mechanisms for the control and certification of information, and provide access to queries through the Web.

Database of Events

This database will provide an opportunity for the various national and international institutions and agencies to promote the events they organise. Users will get a wide overview of activities such as seminars, congresses, workshops, fairs, etc. organised in the region and in the world on different VT topics. Data will be fed into it in a decentralised manner, insofar as it will be up to the institutions and agencies themselves to supply their own information. CinterNet will set up mechanisms for the control and certification of information, and provide access to queries through the Web.

Virtual Publications

Apart from supporting the virtual publication of Cinterfor/ILO titles (link to services-publications page), CinterNet will publish virtual editions of material developed either in the context of Project RLA/95/M06/FRG, by CinterNet members or by organisations wishing to promote products of this kind.

Database of Youth Training and Employment Programmes in Latin America and The Caribbean

Youth training and employment programmes have become widespread in Latin America and the Caribbean. Despite the innovations and debates that they give rise to, there are no practical tools to gauge them and compare them. On the basis of preliminary studies carried out by Cinterfor/ILO and its member institutions, a database will be developed to make it possible to compare strategic aspects of these programmes, such as: targeting methodologies, design, incentives to training offer, evaluation, etc. This base will be available for consultation in February 1998.

VT Systems in Latin America and the Caribbean

On the basis of various studies implemented in the region on VT in the different countries, an interactive tool will be developed allowing either for individual analysis of each national system, or a comparison of strategic aspects between different systems.

Conferencing

Electronic conferencing is a new and useful resource for the exchange of information, co-operation and research. CinterNet has foreseen the implementation of conferences on various topics, oriented towards the generation of products. Such is the case of a conference scheduled to start in January 1998 on the subject of occupational competencies. The mechanism will consist of a convocation of selected experts that will discuss the matter over a period of one to two months, on the basis of a reference document submitted by another expert who will act as moderator, using the Delphi methodology. Results of the conference will be subsequently implemented in the form of printed or virtual publications.

Virtual Vocational Training Café

CinterNet will also offer an open, unstructured space for dialogue and the virtual coming together of the different persons and organisations connected to the network. It will consist of a Chat space where interested parties will be able to discuss topics in real time.

3. Towards instituting a standing European Network for Cooperation in Comparative Vocational Education and Training Research

Uwe Lauterbach[144]

Preface[145]

For decades, comparative vocational education and training research (CoVET Research) led a shadowy existence in Europe. In the 1960s, when a need for comparative research developed within the European Economic Community (EEC), some steps were taken and the first broader-based studies were conducted in the coal and steel industry, but these were not really developed further. However, because of changing general framework conditions in the context of the EU and Europe at large, because of structural socio-economic changes in the course of globalisation and in view of technological developments and the long-term high level of unemployment in Europe, education, vocational training and employment policies have become a focus of attention. As a result CoVET research is again enjoying increased regard in recent years.

The favourable framework conditions for the development of CoVET research are not the only reasons for this expertise. Research projects conducted by the German Institute for International Education Research (*Deutsches Institut für Internationale Pädagogische Forschung* - DIPF) have been focusing on international comparative vocational education and training research since the early 1980s. The International Vocational Training Handbook, published in 1995, which focused on comparative analyses, can be cited as an outstanding example. Interest in this still young discipline grew.

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[144] This contribution is based on an expertise the author prepared for CEDEFOP in 1998. It helped CEDEFOP in the search for new approaches in the area of research cooperation promotion, some of which have since been implemented (see CEDEFOP Research Arena CEDRA). Many of the suggestions made are also directed to the researchers themselves, who must provide the impetus for cooperation and interaction (Burkart Sellin, March 2000). The opinions expressed in this contribution are not necessarily shared by CEDEFOP.

Our own interest in continuing with this work was not only motivated by our own research. Increasingly frequent studies on systems comparison or the functions of vocational education and training as well as studies by international organisations intended to provide an international comparison of vocational education and training at a glance, are based on methodological concepts which stimulate scientific debate. The issue of transferring findings and exchanging information with policy-makers, international organisations, the social partners and education administrations have become increasingly relevant as well.

One important objective of CoVET research is the rebuttal of often simplistic attempts to categorise national education systems according to an ideal-type conceived to high standards and given a seal of approval. Frequently, the comparative results presented should have been modified on closer examination of the framework conditions and the specific context. Since, in addition, certain artefacts and stereotypes have repeatedly been introduced as research approaches, it became apparent that CoVET research needed further development. Global political and economic framework conditions confirmed this necessity. The demand also grew in relation to the development of the EU and more intensive cooperation and integration of the Member States. Politicians and practitioners expect science and research to provide results which help them to make decisions on as objective and transparent a basis as possible.

The Bonn Conference on *Cooperative Vocational Education and Training Research: Balance and Perspectives*, which took place in January 1998 and was organised by CEDEFOP in cooperation with the German Institute for International Educational Research (DIPF), the German Federal Ministry of Education, Science, Research and Technology and the European training Foundation (ETF) serves as an example of this

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[145] List of abbreviations at the end of this contribution

finding. It was held because a substantial need for comparative research in the area of vocational education and training was suspected throughout Europe, but CoVET research was developing very differently in the various countries at the time, and methodological, organisational and thematic questions connected with the development of CoVET research needed answering. This study will investigate the benefits and conditions associated with instituting a Network for CoVET Research in Europe (working title) to take up these approaches and develop them further with the objective of consolidating the status of CoVET research as a recognised discipline in the face of the above-named challenges. A number of recommendations for its development will be presented.

Initial position in view of growing internationalisation

The development of the highly industrialised nations into "information, knowledge and service societies", and the associated structural transformations, has undergone only rudimentary study with regard to its consequences for education and initial and continuing training. Industrialised societies are indeed experiencing a fundamental transformation towards service societies. Automation, information and communications technologies are becoming increasingly widespread in the real world of occupations. Systems thinking and a capacity for and openness to lifelong learning are becoming higher and higher priorities as indispensable occupational competences. New potential for creativity must be discovered and individual and collective participation in this transformation must be made economically and socially achievable for every woman and every man. The development of vocational education and training as understood here, with its central didactic instrument of *key qualifications*, is central to this process.[146]

With the general growth in international cooperation, the enormous increase in the exchange of goods and services, and cross-border mobility, international cooperation in education and training is becoming increasingly important. Activities of the EU Commission (report: Accomplishing Europe through education and training), international cooperation in VET and the numerous bilateral and multilateral interrelationships demonstrate this. There is a growing need for action and, in consequence, demands for scientifically reliable service provision on the micro, meso and macro levels. In addition to investigating international and supranational aspects, specific consultation and information services, analyses and syntheses – on trends in employment, qualifications and competences, for example – must be prepared so that international experience is available to decision-makers at all levels of education and training policy and practice. The European level is particularly important here in view of growing integration and the already partially achieved economic and monetary union, in consequence of which the harmonisation of social and educational and training standards will, together and in connection with the issue of an active EU employment policy, increasingly become the focus of attention.

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[146] Cf. Weinert 1998, p. 23ff.

In connection with internationalisation, the demand for intercultural experience, information and analyses on foreign education and vocational training systems, and for comparative studies has risen considerably. Under the pressure of increasingly tough international competition, the strategic and operative assets associated with intercultural knowledge and information on what is being attempted or implemented in *other* education and vocational training systems become more obvious. It is the task of CoVET research, among other things, to make these interrelationships transparent and to make it possible to learn from and with one another. It is not, however, a matter of conducting *best practice* studies, but of showing which is the best path, which changes are necessary and how, in view of the great challenges presenting themselves, the necessary innovations can best be introduced into the practice of the different Member States and regions. This must be achieved effectively with regard to methodology and organisation, economically and fairly and taking into account democratic value systems. It must also take into account the individual countries' traditional cultural values, institutional, socio-economic and socio-political pre-conditions. These are all typical subjects of CoVET research.

Additionally, we are in the middle of a process of an international redistribution of work, which demands a great deal of adaptability from all regions within Europe. No longer does the global export of products developed and manufactured here alone ensure economic success, but, rather the global interaction of individual companies and conglomerates. Personnel from the European nations are researching, developing and producing in various locations internationally. Closer international cooperation demands considerable know-how and skills denoted by the term "intercultural competence". Working abroad or together with colleagues from abroad, whether close to home or further away, is an ever more common experience. An understanding of colleagues' cultural contexts is going to be an essential requirement for occupational employment. Familiarity with other vocational training systems, educational and qualifications provision and outcomes are an important aid to this understanding, not only at management level but for every employee.

Today, national decisions affecting politics, the economy and science are scarcely even possible without looking beyond one's own backyard. Enterprises and administrations have an international perspective. And while the emphasis is still on the EU, central and eastern Europe are increasingly becoming a focus of attention. In addition numerous international links exist to both industrialised countries and developing and newly industrialised nations. The many future decisions will have be made on the basis of the current qualifications of personnel and existing institutions. Undeniably, vocational education and training is of particular importance for the economic and social development of disadvantaged countries and regions. The demand for information on the diverse and "mutating" education and vocational training systems within the context of their specific political, social and economic circumstances is constantly growing. Whether and to what extent they will converge or diverge is one of the questions which CoVET research will have to deal with.

Some vocational training systems in Europe are better prepared than others for the challenges posed by internationalisation and European integration. The outstanding importance of vocational education and training for the economic and social development of the different states and for European cohesion with the framework of the EU, the EEA and the associated states is incontestable and will continue to gain in importance within the framework of the emerging common employment and social policies. Articles 126 and 127 of the EU Treaty emphasise these interrelationships, as does the new chapter on employment in the Amsterdam Treaty. Not only concerned experts are convinced that purely national solutions to economic and social problems are no longer feasible. This opinion is now quite commonplace.

These arguments may seem to imply that the need for CoVET research is determined primarily by 'economic forces'. This is not true, however. A number of other arguments indicate the necessity for promoting CoVET research. The researchers involved [147] and managers of organisations operating internationally repeatedly emphasise the benefits of CoVET research. Time and again they have drawn attention to the following aspects: [148]

(1) Making the objectives, experience and experiments of other states utilisable:

> This research goal has been important since the beginnings of CoVET research and is gaining in significance with the increase in international cooperation. Although, of course, the players will have to gain their own experience in transforming their systems, the argument about "learning from other countries" helps further development of the systems in many respects. It also provides a link to the next aspect.

(2) Ethnocentric *reservations stem less from not wanting to know than from a lack of adequate information*. Comparative studies make systems transparent (systemic or problem-oriented approach, analysis on several levels), providing effective arguments against rudimentary ethnocentricity. A *contextualising understanding of the systems* is the basis for an unprejudiced dialogue among the players in education and vocational training and thus a pre-condition for harmonising them.

(3) Similarity of problems in different countries:

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[147] Richard Koch: Perspektiven der vergleichenden Berufsbildungsforschung im Kontext des europäischen Integrationsprozesses. In: *Berufsbildung in Wissenschaft und Praxis*, 20(1991)2, p. 14ff. provides a good overview of the status of CoVET research and its function in the process of European integration.

[148] Cf. Holmes, Brian: Vergleichende Erziehungswissenschaft als wissenschaftliche Disziplin. In: Busch, Adelheit; Busch; Friedrich, Wilhelm; Krüger, Bernd; Krüger-Portratz, Marianne: *Vergleichende Erziehungswissenschaft. Texte zur Methodologischen Diskussion*. Verlag Dokumentation: Pullach bei München 1974, pp. 115 - 132, here p. 115.

Robinsohn; Saul B.: Erziehungswissenschaft: Vergleichende Erziehungswissenschaft. In: Speck, Josef; Wehle, Gerhard: Handbuch der pädagogischen Grundbegriffe. Munich 1969. pp. 456 - 492.

Heyneman, Stephen P.: Education Cooperation between Nations in the 21st Century. In: *Vergleichende Erziehungswissenschaft (Comparative Education): Herausforderung – Vermittlung–*

Increasingly close cooperation in supranational amalgamations, international cooperation and inexhaustible possibilities for information exchange help make problems such as unemployment among young people, pressure to modernise, and the adaptation of vocational education and training systems to the challenges of post-industrial structures more transparent and contribute to their solution. These problems are similar in most of the highly industrialised states.

(4) Contribution to the theoretical understanding of *education and training* and its planned development, also as a basis for policy guidance:

As an important basis for policy guidance, CoVET research contributes significantly to our understanding of the *historical and cultural* development of education and training within the framework of the different systems. At the same time its results contribute to theory formation related to the regulation of systems and quality assurance within the systems, for example. These results then form the basis for reliable policy guidance, which can also place ad hoc enquiries in context (international development, historical dimension).

(5) In order to cope with these comprehensive tasks, it is absolutely essential to *raise the level of international information and international cooperation* – in general and in the area of education and vocational training.

These findings are particularly important within the EU. We need only to consider the transparency of systems, the ever more closely interrelated national labour markets, the reciprocal recognition of examinations, equivalence procedures, etc.

The *Study Group on Education and Training* set up by the European Commission argues on similar lines. Its report takes up the central ideas of the White Paper "Teaching and Learning: towards the learning society", deals with them in depth and makes recommendations which emphasise the significance of the *development of education and training* for the development of a European identity, for preparation for the emergent *learning society* and for Europe's economic viability. Several times the report

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Praxis; Festschrift für Wolfgang Mitter zum 70. Geburtstag, edited by Christoph Kodron, Botho von Kopp, Uwe Lauterbach, Ulrich Schäfer, Gerlind Schmidt. Cologne 1997, pp. 219 - 233.

points out the importance of CoVET research for the further development of education and training systems in Europe [149]

CoVET research provides guidance for the players and contributes to the development of vocational training within these states and the harmonisation and exchange of experience between states, with the objective of undertaking joint efforts to renew and reform the systems, taking into account global challenges. This also contributes to the development of a European VET policy.[151]

This transfer mission cannot be accomplished without the scientific incorporation of issues from the field of policy, case and systems analyses and theory formation. Apart from these policy-oriented elements of CoVET research, the designation of the group – in German *Studiengruppe über allgemeine und berufliche Bildung* and in English *Study Group on Education and Training* – in itself shows that even in a small Europe, the cultural context is necessary for the semantic interpretation of texts in different languages[145] This example, and many others which readily come to mind are omnipresent in a structural comparison, give just some indication of the complexity of the area in which CoVET research is situated. For this reason, the results of CoVET research – including its transfer function in policy consultations – are only guaranteed when the *quality of the research* is indisputable. When formulating our question we must therefore be certain that this criterion is fulfilled. It is quite clear that this claim will almost automatically be met if a high-level scientific debate is conducted within

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[149] European Commission (1997): *Accomplishing Europe through education and training*, report of the Study Group on Education and Training, Brussels, Luxembourg, p. 31 and p. 134 (also available in French and German).

[150] Cf. Council Regulation on the establishment of CEDEFOP dated February 1975.

[151] All researchers doing comparative work in the broadest sense of the term must expect one fundamental difficulty, that of representing the most important concepts and designations of the systems investigated in the language in which the study is written. Usually the terms are translated: the *scuola media* becomes the 'intermediate secondary school' and the *istituto tecnico* becomes a 'technical grammar school'. If the translators are "lucky", the original concept corresponds exactly to the designation in the translation. More usually, the meanings of the words in the different languages are not congruent and often grievous misunderstandings ensue.

Of particular importance is Brian Holmes' contribution on this subject. He deals with the collection and classification of data on national education systems and makes a clear case for the use of the original designations of the relevant national education system. In his opinion it is scarcely possible to establish incontestable consistent internationally valid designations for certain types of school in English as the language of communication. He cites as an example the American *high school* and the *equivalents: lyceè* (France) and *Gymnasium, Hauptschule, Realschule, Fachschule* (Germany).

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the scientific community to a high standard and if, in addition, the transfer of results to the innovation and policy field is made within a dialogue which also conveys the needs of the players (policies, administration, social partners, etc.).

The following chapter develops and discusses criteria which could contribute significantly to the development, consolidation and permanent constitution of CoVET research. It also presents some preliminary work which might be drawn on to secure this mission within the framework of the EU.

Continuing quality assurance for CoVET research results

The cultural and organisational relationship of CoVET research to each of the various other scientific disciplines is particularly important for the European Dimension. Most countries do not distinguish between Comparative Education and CoVET research. In countries with no vocational and technical education tradition, COVET research subjects are investigated by researchers from widely different disciplines. They can come from the educational sciences, teacher training, social or political sciences, economics, psychology, law or engineering, and deal with specific research issues comparatively.

It is striking, when the various disciplines and their central comparative themes are analysed, that communications exist within each discipline at the national and international levels, but the discussion between the disciplines or even interdisciplinarian cooperation is left mainly to chance. This also applies to information on research outcomes and their transfer to the field of policy.

This working at cross-purposes can be compared with the flight paths of civil aviation. These, too, are planned to exist at a suitable distance from each other. But in their case the policy makes sense for *known reasons* and, moreover, there are airports which ensure transfers and communications with each other. This model could serve as a structural stimulus for a Europe-wide network of CoVET research.

See Holmes, Brian (1981): The Collection and Classification of Data – National Profiles, in: ibid: *Comparative Education, some considerations of methods*, London: Allen & Unwin, p. 93.

In many cases, however, research commitments are of limited duration only. Permanent resources must be developed in view of the greatly increased demand for studies and research work to assist policy decision-makers and practitioners. The need to professionalise CoVET research is becoming apparent in more and more Member States. The study of new developments; accompanying and evaluation research into model projects and innovations; and regional, sectoral and occupation-related analyses are become increasingly widespread. Currently comparative research is being consolidated according to quite specific topical themes and subjects using very diverse methods. Therefore this is a good time to take the initiative and set up a Europe-wide network.

Central research themes such as the transition of young people from the education and training system to the world of adulthood and work, mobility within the EU and beyond, the transformation of the central and eastern European systems, etc. are usually oriented to acute problem complexes. Ethnocentric results, artefact formation, stereotypes and studies in which the subject of the investigation was not researched carefully enough become particularly common when the market for such comparative studies and for consulting services starts booming, for example within the framework of development cooperation or of projects in transformation countries.

EU Action and Transformation programmes in the area of education and training, in addition to the efforts of CEDEFOP and, more recently, the Turin European Training Foundation (ETF), as well as the EU Framework Research Programmes with their central themes of socio-economic and education research, have made a significant contribution to the generation of research capacities and resources in this field. The evaluation of the Action Programmes and their effect on the vocational education and training systems is increasingly important.[152]

Research topics are not always strictly directed to formulating interesting, knowledge-engendering questions, but rather towards the prospects of research funding from sponsors. Currently the "market" is booming again. Many feel called to Comparative

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[152] Cf. Göbel; Hesse; Lauterbach: Die berufliche Bildung braucht den Dialog mit dem Ausland. Der Internationale Fachkräfteaustausch (IFKA) und sein Folgewirkungen. Research study Baden-Baden: Nomos 1998.

Research. Others, however, deny that comparisons of systems and subsystems are appropriate at all in a time of intensifying supranational and international cooperation.

While some claim that *international* VET research has superseded CoVET research, it should really be standard scientific practice that the two belong together, although each has its own original focus. It is claimed that CoVET research only exists because national states are selected as the geographical framework of comparison. Against these arguments it may be said that the founders of *Comparative Education* started their comparative research when the national education systems were created in the early 19^{th} century in Europe and in addition to the national states (e.g. France) a number of regional states, ranging from city-states to the multinational Habsburg Monarchy, were available as objects of comparison. Today we talk about a Europe of regions. In many cases the education systems, too, have a regional structure. In the area of vocational education and training this is even more evident. Here we find structures which are specific to national, regional or local levels or even to specific enterprises and businesses, but operate within the national systems philosophy. This development alone is enough to show that the fields of CoVET research are certain to expand in future. European Union policies (cf. Amsterdam Treaty) and those of multinational enterprises, which, while operating worldwide, adapt their activities regionally, also support this assessment. For this reason the term *international VET research*, which has a different meaning within the scientific community, cannot be used as if it signifies that the *next* stage of comparative research had been reached. It really should be scientific practice that the two belong together, although they have different focuses.[153]

This unsatisfactory situation could be the result of methodological deficiencies in the pertinent sciences. However, this seems unlikely, since the international orientation of the research subjects and cross-border research cooperation are not new. An inventory of *Comparative Education* and a reference to important representatives of the empirical social sciences such as EMILE DURKHEIM, the *father* of empirical social science, alone suffice to remind us that their methodological concepts, comparison being a fundamental methodical principle for obtaining findings, and their actual research never denied the internationality of their areas of research. The field of research was usually deliberately located "abroad" in the interest of knowledge transferral.

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[153] *International VET research*, as a sub-discipline of *comparative vocational and economic education*, absorbs its findings and results. In addition to accompanying research into international VET cooperation projects, central themes are the internationalisation of the educational process and international organisations. *Comparative vocational education and training research (CoVET research)*, as a particular form of vocational education and training research, investigates the international development of the subjects of vocational education and training research comparatively and makes the results available and utilisable for policy guidance in the national context and for international organisations and amalgamations. The research approaches are interdisciplinary but concentrate on themes which deal with VET in the context of societal trends, especially economic and labour market trends.

Apart from these historical grounds for comparative research, the comparative approach itself, comparison being a fundamental methodical principle of science for obtaining findings, justifies efforts to stabilise and promote CoVET research in Europe[154]. The EU candidate states of central and eastern Europe have shown particular interest in CoVET research recently as part of their preparation for membership of the Union.

In view of this growing demand for CoVET research the strategic formulation of questions should no longer address the justification of this research and the ABC of empirical or hermeneutic methods. Within the *scientific community,* there has been little or no controversy about the methodological principles of comparative research since the fundamental debates of the 1960s, even if it must be said that basic research for the further development of methodologies is still necessary. In order to maintain this contact permanently, discourse with the scientific communities of the relevant fundamental sciences must be fostered constantly.

It is certainly counterproductive for the quality of scientific results if ignorance or annoyance about the lack of response from the practical research community in the scientific communities, which can be considered structurally conservative, block the opportunity for debate.

At this point we would like to mention another phenomenon – that of the different functions fulfilled by universities and non-university research institutions in further developing CoVET research. While the universities are usually more concerned with basic science and theory formation, non-university institutions focus mainly on applied, empirical or qualitative research. In the long term, even if there are no organisational structures to guarantee continuing dialogue between the two, major planned publications and congresses involving the relevant scientific communities will provide a forum for scientific debate.

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[154] Comparisons are not distinctive features of *Comparative Education* or Comparative Vocational Education and Training Research. Anthropology has taught us that "it is only in comparison with others that it is possible to understand oneself" (Tedesco, Juan Carlos: Research on Comparative Education. In: International Bureau of Education (ed.) Education Innovation and Information, No. 80, Sept. 1994, p. 1).

In the phase of expansion of comparative research and comparative policy consulting which we are witnessing currently, ongoing communication and cooperation between participants and those concerned should be initiated, intensified and consolidated. In addition, an attempt should be made to integrate "floating" consultants working outside the universities and the liberal research institutions more, in order to improve the quality of their consultant work and to make their results available to posterity. The outcomes of scientific and specialist controversies should also be documented so that these too can be made permanently available to the *scientific communities* and specialist circles – including independent freelance consultants and commercial institutes.[154]

Concentration on Europe and CoVET research in the narrower sense?

As shown above, CoVET research is an integrative discipline whose fields of research some researchers only occasionally till, while other researchers are constantly involved with vocational education and training. The same applies to associated institutions (university chairs, university institutes, independent research institutions) in the public realm, in the realm of the intermediary institutes such as non-profit-making institutions, and also to commercial consultancies. Contact with the base

disciplines, such as vocational and economic education in the fields of sociology, psychology or economics, and their scientific societies, is particularly difficult.[155]

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[154] *Specialist circles* refers to corporate clients or consumers of research results, such as education and training administrations, enterprises and organisations, and individuals such as managers, trade unionists, consultant services, students, trainers, teachers, etc.

[155] In p*sychology* alone there are a number of scientific societies involved with comparative research which also focuses on vocational education and training, e.g. the European Federation of Professional Psychologists' Associations, the International Test Commission and the International Association for Cross-Cultural Psychology (IACCP). This principle also applies to *sociology* in national

The scientific *community* cannot therefore be limited exclusively to the political and geographical unit *European Union*. If we concentrate on this area, without links to discipline-related Scientific Societies it can give the impression that the members of such organisations prefer to move in closed circles and consciously or unconsciously seek "protection" from globally operating scientific communities of their own specific discipline. Currently, scientific discourse centres on Europe, North America and Asia/Australia. However, as a consequence of the rapidly growing potential for information and communications, the various regions are beginning to network with each other. Many countries in Latin America and Africa, for example, are increasing their cooperation. The last international congress (1998) of the *World Council of Comparative Education Societies*[156] was actually held in South Africa.

However, it would seem to make economic sense in the first instance to concentrate on the European political area. At the same time, discussion among the specialist societies of the different disciplines must always be sought and the global dimension taken into account. Without this regulatory effect, the obstacles to the constitution of CoVET research described above would certainly occur.

In the long term, however, North America, Japan and Australia, South America and South Africa must be included if we are to achieve permanent benefits. In these countries CoVET research, often under another name[157], has gained importance as a

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communities. For instance, the theme of the 26. *Deutschen Soziologentages* [26th German Conference of Sociologists] in Düsseldorf in 1992, "*Lebensverhältnisse und soziale Konflikte im neuen Europa*" [Living conditions and social conflict in the new Europe], presented a number of results which help to situate vocational education and training in the social context. The International Sociological Association. also has a *Research Committee on Comparative Sociology (RC 20)* and *Research Committee on Sociology of Education (RC 04)*. In the *International Social Science Council (ISSC)*, Else ¨yen, designated a Comparative Sociologist, heads a task force of the Comparative Research Programme on Poverty (with vocational education and training themes). At the European level, attempts have been made for a long time to collect the results of comparative Labour Market research, which includes the education system and the social welfare systems. Cf. Katholieke Universiteit Leuven, Hoger Instituut voor de Arbeid with a questionnaire for relevant research institutions dated 08.07.1991.

[156] The President of the *World Council*, David Wilson, is a designated Canadian vocational and technical educationist with global experience.

[157] Examples of important regional scientific communities are:

- ANZCIES (Australian and New Zealand Comparative and International Education Society);
- CESE (Comparative Education Society in Europe);
- CIES (Comparative and International Education Society, USA).

factor in competitiveness, because of the growing political significance of vocational education and training.

Apart from the EU, other international organisations, such as the European Council in Strasbourg, the International Labour Office in Geneva and other sub-organisations or departments of the United Nations (UNO), in particular UNESCO and its VET centre UNEVOC, the *Human Development Research Department* of the World Bank or the *OECD* play an important part in the development of CoVET research.

Two aspects of *European CoVET Research* could be promoted through the international scientific societies and supranational organisations:

- CoVET researchers must become involved in relevant scientific societies, such as CESE, World Council, IEA and ATEE, especially at scientific conferences; and
- all research results directly connected to vocational education and training should be brought to the attention of researchers working in the European context (report character).

Such an exchange of results could represent the beginnings of further cooperation. In the first instance, integration in the planned *Clearing House for CoVET Research* and a *European Scientific Society in Comparative VET Research* – both technically organised as networks – should only be on the basis of information, themes and methods, since at present anything else would be too complicated for the participants and not yield sufficient returns. Only researchers directly involved in *CoVET research* are keen on concrete, organisational cooperation.

These distinctions continue in the national communities. In Germany, there are at least four specific CoVET research groups: the *Deutsche Gesellschaft für Erziehungswissenschaften*, with Comparative Education and Vocational and Economic Education sections; the *Gesellschaft für Vergleichende Pädagogik*, which is independent of these organisations and focuses on the new Länder in former East Germany; and the *Arbeitsgemeinschaft für empirisch pädagogische Forschung (AEPF)*. Their 55th conference in 1997 focused on "Culture Comparative Education Research". The international performance comparisons in mathematical and natural science subjects (TIMSS) conducted by the *International Association for the Evaluation of Educational Achievement (IEA)* are another focus of AEPF research.

CEDEFOP and comparative vocational education and training research

CEDEFOP's years of effort to coordinate VET research and develop CoVET research in Europe are well recognised. Since the end of the 1970s it has continually organised research projects and subsequent events to promote cooperation among research institutions and researchers and to transfer results to EEC and Member State policies and practice. The comparative research approach itself was a focus of this work, in relation to policy-relevant and topical issues. In addition, an attempt was made to obtain an overview of the different states' research activities and research institutions and to promote dialogue among these institutes and persons. Considerations were not restricted to the EU, as the September 1991 conference showed[158]. In the 1980s there were annual meetings of national research institutions in the field of *VET research,* providing an exchange on research themes and priorities. More complex comparative studies were conducted into vocational training systems, into qualifications mechanisms and certificates, into the participation of social partners' organisations in VET and into continuing training in the Member States. Less work was done with regard to methodological issues and comparative approaches themselves.

Since then there have been crucial conceptual changes. Within the framework of the network of national research institutes (*Ciretoq*[159]), which is coordinated by CEDEFOP, there are transnational research projects which are increasingly comparative in structure. The *Report on vocational training research in Europe,* too, which is prepared by CEDEFOP, is not restricted to collecting data and preparing synopses. CoVET research is implicitly represented in the interdisciplinary concentration on certain key issues such as mobility. Other CEDEFOP activities have similar approaches. Activities to promote CoVET research focus less on description and analysis than on active structuring and motivation.

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[158] E.g. CEDEFOP (ed.) *Promotion of cooperation amongst research and development organizations in the field of vocational training.* Working meeting 11 - 12 September 1986. Luxembourg 1987 and CEDEFOP (ed.): Towards co-operation among researchers of VET in Europe. Papers presented at the platform meeting of European Vocational Training Research Institutes (27 September 1991). Luxembourg 1992.

[159] Sellin, Burkart: Cooperation in Research on Trends in the Development of Occupations and Qualifications in the European Union. CEDEFOP, Thessaloniki 1998.

The first CEDEFOP report on vocational training research in Europe, published recently, attempts to take stock. The conference on the status of work on this report, which was held in Thessaloniki in July 1997, and the conference of national agencies' experts of November 1997 clearly revealed the necessity for dealing with the methods and perspectives of comparative vocational education and training research (CoVET research).[160]

Numerous themes which are the subject of European VET policies need the support of comparative vocational education and training research. These framework conditions induced CEDEFOP, together with the German Institute for International Educational Research - DIPF and the cooperation partners (ETF, BMBF) to hold the conference *Comparative Vocational Education and Training Research in Europe – approaches, policy links, transfer of innovation* – in Bonn on 15 and 16 January 1998.

An important result of this conference was indications on the possible future role of CEDEFOP and possibly the ETF in supporting the relevant researchers, institutes and research promotion institutions in Europe both from the point of view of methodology and organisation and also with regard to content and subjects which were still to be precisely defined and fully developed within the framework of concrete research cooperation. This intention serves CEDEFOP's original objectives: support and assistance, preparation and assessment, policy priorities of the EU and the associated states, taking into account the wants of the social partner organisations, and the results obtained within the framework of social dialogue at the European level.

On the basis of the results of the Bonn conference on CoVET research in Europe, a network may be developed which, in addition to conventional techniques, also exploits the technical basis of information technology. It should provide for effective and efficient interaction of vocational training researchers in Europe, their institutes, the relevant research promotion institutions and the target groups of studies (political and social players and their organisations).

Within the framework of this preliminary study, the question was also examined whether and to what extent CoVET research could in future be strengthened by the

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[160] Tessaring, Manfred: Training for a changing society. A report on current vocational education and

EU and promoted in accordance with its significance, in particular utilising *electronic information and communications technologies* (IT). This "technical" element makes it possible today to realise the undisputed objective of 'constituting' *interdisciplinary CoVET research* in Europe. How can this be achieved? The following items should be given high priority:

(1) communication, i.e. exchange of information and experience, between researchers (including young researchers and their support), those involved in training teachers and trainers in vocational education and training, and their continuing training, and those employed in education administration for the planning and development of vocational training;

(2) the establishment of a European Scientific Society in Comparative VET Research for comparative VET researchers whose original field of research this is, possibly within the framework of existing international scientific societies;

(3) networking of the various scientific communities for the exchange and adaptation of research results by linking servers and through a Clearing House for CoVET Research offering literature, complete texts, abstracts, state of the art reports, calls for conferences, calls for research proposals, etc.;

(4) transfer of results from the scientific communities to practice (publication of services for education administrators, the social partners, policy-makers, consultants and processing of enquiries);

(5) transfer of the requirements and demands of policy-makers, the social partners, education administrators and the realities of education to the scientific communities.

CEDEFOP's *European Electronic Training Village*, installed in 1998, should serve as a base for the *Clearing House for CoVET Research* server. CEDEFOP has selectively developed its competence with regard to the relevant content and technology in recent years. The *Clearing House* and the *European Scientific Society in Comparative VET Research* as a whole should, however, preserve its autonomous and independent char-

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training research in Europe, Thessaloniki: CEDEFOP 1998.

acter and should cooperate with several European institutions and national research and promotional institutions concomitantly, while networking with the scientific communities.

For this reason, investigations should be initiated to establish whether

- the European Scientific Society in Comparative VET Research itself should not be set up in the form of a new scientific community, a scientific society or a non-profit-making organisation and as an independent facility;
- the Clearing House for CoVET Research should be given a special homepage in 'a home of its own' within the framework of CEDEFOP's electronic training village, in order to optimise the tasks of communication and transfer, in particular;
- the entire network can effectively start work in 2000 in the form of a pilot project within the framework of the EU Leonardo da Vinci vocational training programme, which is currently entering a new phase, in close cooperation with CEDEFOP and the ETF.

Networks in CoVET research

Originally *network* was a purely technical term, as in railway network or broadcasting network, etc. Today, networking and the global telecommunications networking (Internet) with its billions of participants and the installation of 'networks' for specific topics at all levels including international and European levels has become almost commonplace. Since the 1970s they have no longer been restricted to military or academic circles but have come to include social strata. In the beginning, socially concerned people and cosmopolitans used a *network* which was spontaneously organised and reorganised. It was based on personal contacts and diverse communication, operating with a minimum of centralised organisation. Most of these types of networks disappeared again, however, probably mainly because no one felt particularly responsible for their development and care.[161]

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[161] Cf. on this section in particular Burmeister, Klaus (ed.): *Netzwerke: Vernetzung und Zukunftsgestaltung*; (documentation of the symposium "Vernetzungen – Netzwerk und Zukunftsgestaltung" of 9 December 1989 in Berlin); Weinheim/ Basel, 1991, pp. 43 and

It is now generally accepted that networks cannot look after themselves. They need a defined purpose and frequently updated, specific terms of reference. Responsible people, institutions, committees etc. take care of network *coaching*, i.e. the current terms of reference, working methods and subjects, all of which need frequent redefinition. It would be wrong to create a hierarchically structured system of command with corresponding control mechanisms. This would contradict the whole idea of the network. It is important to keep to the principle of thinking globally but acting locally.

CoVET research has little documented experience of the relationship between *coaching* and the use of electronic networks. Examples can be found in the field of Comparative *Education*, however. Michael Vorbeck, for example, complains that the electronic *European Documentation and Information System for Education (EUDISED) database*, developed in the early 1970s by the European education research society, has not been sufficiently exploited.[162] He describes the diverse documentation offered by *EUDISED* and gives us reasons for the inadequate development of this network, citing the unequal development in different countries, the fixation on national and regional problems, the differences in terminology due to cultural differences, and language barriers, among other things. In the end, the proposals for the development of a European education research based on this analysis boil down to *coaching* for the *EUDISED* network.

A clearing house is a place of collection and regulation with a specific theme, such as the Clearing *House for Vocational and Technical Education* in the ERIC information system[163]. The members of this network "supply" the clearing house with the results of their research and other information pertinent to the thematic focus. The clearing

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Sydow, Jörg; Windeler, Arnold (eds.): Management interorganisationaler Beziehungen. Opladen: Westdeutscher Verlag 1994.

[162] Vorbeck, Michael: *Bildungsforschung und besonders Vergleichende Erziehungswissenschaft in Europa*. In: *Vergleichende Erziehungswissenschaft (Comparative Education): Herausforderung – Vermittlung – Praxis*; Festschrift für Wolfgang Mitter zum 70. Geburtstag, edited by Christoph Kodron, Botho von Kopp, Uwe Lauterbach, Ulrich Schäfer, Gerlind Schmidt. As a result of cooperation between 37 national institutions a European Educational Research Yearbook will be published.

[163] The *Educational Resources Information Center* (ERIC) is an American national information system financed by the federal government of the USA with 16 thematic clearing houses, associated connected clearing houses providing a number of services and products relating to a broad range of educational themes and issues, etc. Open enquiries can be made via the *AskERIC Service for Educators* (AskERIC Questions & Answers); information on literature can be obtained from the

house organises the data and makes it available to the public. Apart from this virtual task, which is represented worldwide through various offers such as an overview of the societies and networks which work on CoVET research subjects, documentation of results, searches for literature, press services and theme-related searches for complete texts, the clearing house also offers real opportunities to work. Students, researchers, policy-makers, the social partners, associations and the specialist public can find information directly relevant to specific research projects or application-related questions – including the chance to discuss these questions with the staff of the clearing house.

This real location in a virtual world of *International CoVET Research* can provide people from regions and countries which are still primarily involved in the national development of CoVET Research with an opportunity to engage in fieldwork and trainee programmes, and thus actively contribute to the development of minimum standards within this area of research and transfer.

(1) The permanent constitution of CoVET research will only succeed if those involved work interactively, cooperatively and communicatively. The objective should be to publicise the many current activities, network existing societies and networks on a meta-level and offer a forum which links the function of supporting scientific discourse with the transfer of research approaches and results to the specialist public (including policy-makers, administration and social partners) and also provides documentation and topical information.

(2) The success of setting up such a network will also depend considerably on surveying the motivation of the different potential stakeholders and interest groups, registering their common needs and interests and jointly developing the key areas and subjects of work.

AskERIC Virtual Library and abstracts and other documents found (Search the ERIC Database) (http://ericir.syr.edo/ithome).

Development of CoVET research in relation to the current change in paradigm in the communications culture

If these challenges are to be faced successfully it will be important to take into account the change in paradigm in the communications culture among scientists themselves and between scientists and their partners/customers in society and politics. Neither the post coach or the homing pigeon (JULIEN DE PARIS), the temperamental motor car or the telephone (SADLER, DURKHEIM) can provide adequate solutions. The nations of Europe have grown as close as they have from a political will to do so, but also because of modern transport technology and communications technologies which are ever more affordable. International interrelationships, already extremely complex, are becoming more intensive still as a result. This also applies to research and in particular to international comparative disciplines such as CoVET research. EU research policies and those of other international organisations are contributing to this development.

Intensified cooperation in research and its scientific yield is still today usually exploited “haphazardly”. This applies especially to CoVET research as a young science interacting with several disciplines. Comparative Education has produced, on the regional worldwide level, internationally operating scientific societies with a relatively long tradition, such as the *Comparative Education Society of Europe* (CESE) or the *World Council of Comparative Education Societies* as a forum for the diverse issues and the disciplines involved. The *World Council*, especially, has provided a platform for scientists from widely different disciplines to communicate with one another. Nevertheless, they all focus on the research subject “education”, including vocational education and training.

CoVET research has not yet produced such scientific societies, or if they exist they are still in the embryonic stage. Thus MULDER’S VETNET, which operates within the framework of the *European Education Research Association* (EERA), is making a serious attempt to develop cooperative cohesion of this kind. Two comments may be made here. One, the current focus is clearly on institutions and researchers in applied research; there is no perceivable cooperation with institutions and researchers in more theoretical research as yet. Two, within Europe VETNET does not appear to have succeeded in equitably including all the interested European states, especially those of southern, central and eastern Europe, within the framework of its present regional and geographical composition and recruitment. Despite these deficits at the present moment, *EERA* does not seem unfitted to form the organisational framework for a *European Scientific Society in Comparative VET Research*.

Up to now, conferences and congresses on VET research have provided a haphazard overview of the research activities of the people involved, in contrast to those of the 'established' societies (CESE, World Council) with their structured, theme and outcome-related dialogue. Additionally, a certain balance between independent and commissioned research should be sought, even though the latter will probably usually predominate in VET research.

The World Council and the CESE stipulate keynote topics for their biennial congresses. For example, the motto of the CESE's 1998 event in Groningen was "State-Market-Civil-Society". Contributions are targeted to this central theme. In contrast, EERA's annual *European Conferences on Educational Research* (ECER) tend to take as their standard of orientation the existing 14 networks and categorise the corresponding activities accordingly. Up to now they have been organised on the principle of obtaining a profile of the activities of network members and exchanging information.

Naturally, the researchers involved in CoVET research in Europe – in the widest definition – use mainly those national and international scientific societies and their networks which belong to their discipline, i.e. the relevant sociological, psychological and economics organisations, etc.[164] It is hardly to be expected, therefore, that researchers and research institutions not primarily involved in vocational-education oriented CoVET research will become involved in a VET-oriented scientific society or a corresponding network.

A few examples should serve to explain this involvement, which begins at the national level and continues on the regional and global levels. *Comparative education economists* such as Backes-Gellner (Germany – Great Britain), Blossfeld (Europe and worldwide with a focus on apprenticeships), and van Lith and Timmermann (financing of vocational education and training) exchange views and information at the German national level in the *Bildungsökonomischen Ausschuß der Vereins für Socialpolitik* [Education Economics Committee of the Society for Social Policy]. In the international context the OECD is an important partner. *Comparative education sociologists* from European countries, commissioned by the EU to conduct comparative investigations into the transition from the education and vocational training system to the employment system in a number of EU countries, are organised in their own *European Research Network on Transitions in Youth*, but present their results in the national scientific societies (e.g. the *Deutsche Gesellschaft für Soziologie* [German Society for Sociology]) and on the European and global levels in the relevant committees of the *European Sociological Association (ESA)* and the *International Sociological Association (ISA)*. Results are transferred and discussed with the social partners and political players at the European level through CEDEFOP and the European Commission.

The *International Industrial Relations Association* consciously seeks the field of transfer, e.g. at the 11th World Congress in 1998, which dealt with 'Development competitiveness and social justice: the interplay between institutions and social partners', where they presented a number of talks in the CoVET research category.

The quality and results of the research projects named here are open to scrutiny in the conferences of the various scientific societies.

Similar problems of categorisation and reference sciences occur with the increasingly important exchange research.[165] Within the EU, and also worldwide, attempts are being made, usually successfully, to promote international communication and transnational cooperation through exchange programmes. Comparison is already implicit in the concept of these programmes. The evaluation of VET measures and programmes is also an important strand of CoVET research.

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[164] E.g.: the International Union of Psychological Science (since 1952); International Political Science Association (IPSA) since 1949. Both present their framework and current work on the Internet.

[165] Cf. Göbel, Kerstin; Hesse, Hermann-Günter; Lauterbach, Uwe: *Die berufliche Bildung braucht den Dialog mit dem Ausland*. Baden-Baden 1998.

These examples, which are not, of course, exhaustive, illustrate a repeated dilemma of CoVET research:

(1) As an interdisciplinary science, CoVET research is embedded in many disciplines, which is why researchers so often have different focuses. Interdisciplinary research projects are the exception rather than the rule, although they are an obvious option. A research focus 'vocational training' and a partially related discipline are only to be found in the German-speaking countries, in Denmark, in central European countries and outside the EU, in the USA and Australia. But even here interdisciplinary contacts and cooperation are not necessarily standard practice.

(2) Vocational education and training has many facets. In addition to the education sciences, vocational and technical education and in particular, the social and economic sciences show a certain research competence.

(3) It would simply be asking too much to expect individual researchers, whose work is usually discipline-related, to provide an overall picture of the research landscape or national and international interdisciplinary cooperations. Apart from a lack of knowledge of other disciplines, they lack the time for such tasks. Participating in all the associations and networks of the scientific community, which touch on the fields of CoVET research, is not really feasible because it would be too time-consuming.

(4) Apart from this, it would still not provide a transfer function and links would still need to be forged to policy-makers, the social partners and other comsumers of academic products, and a process of communication initiated.

(5) Neither the terms of reference nor the practical work of the existing networks and scientific societies indicate that they are capable of helping solve the dilemma of CoVET research by promoting a yet-to-be-developed Clearing House for CoVET Research and a European Scientific Society in Comparative VET Research.

These framework conditions are not favourable to the successful further development of CoVET research. The many parallel research activities must be made transparent and transferable. On a meta-level, a *Clearing House for CoVET Research* must act as a *forum* for continuing cooperation between researchers, institutes, research institutions and scientific societies, targeted to promoting confidence and focusing on important research themes. The *European Scientific Society in Comparative VET Research* can provide a valuable basis for scientific debate among researchers whose primary concern is VET research and who up to now have scarcely found a forum for their research results in the international scientific societies or who feel the lack of a platform, apart from the relevant discipline-related scientific society. It can also promote the further development of the discipline.

According to the regulation establishing CEDEFOP, it is responsible for coordinating VET research and should also provide a forum for the players responsible for the further development of VET in Europe. Bearing this mandate in mind, CEDEFOP should initiate a *Clearing House for CoVET Research,* possibly in cooperation with the ETF. In this way, its role at the interface between research, politics and practice could be effectively fulfilled, complementing its existing thematic research cooperation networks such as Ciretoq and TT-NET. The *European Scientific Society in Comparative VET Research*, on the other hand, should be instituted as an independent institution.

It should be easy to convince institutions at the legislative and executive levels of government in the participating states, the social partners and players in vocational education and training that it is indispensable to their own discourse and decision making to have at their disposal international comparative know-how, even if only to stimulate ideas for solving local or regional problems. Apart from this, arrangements will have to be made, taking into consideration the pertinent areas of authority, which permit comparison and mutual recognition of vocational qualifications in the labour market. Players will again be confronted with this problem complex when the candidate states of central Europe soon join the EU. CoVET research can contribute significantly to addressing these problems with ‘product-related’ research results, as well as pure research. CEDEFOP has already prepared the ground for this work to quite an extent.

Gradually, the need for diverse orientation and involving researchers and also active members of scientific societies and networks with different objectives from different geographical and political levels of organisation is becoming generally accepted. The results of the Bonn Conference, statements by researchers who move in more than one ‘circle’ and the declaration by speakers for the social partners, as well as the participation of high-ranking officials from the EU administration in the relevant scientific conferences, all confirm this.[166]

Permanent constitution of international CoVET research in Europe through the establishment of a European Scientific Association for Comparative VET Research

Principle tasks

As could be shown, CoVET research, as an interdisciplinary science, is gaining importance. Researchers from the most diverse scientific disciplines are active in a bewildering number of regional, national and international societies. Research objectives are usually defined purely on the basis of interest or are derived from public calls to tender at (national and supranational level and by international organisations). Research results not only serve the debate within the scientific community but also help prepare policy decisions and those of the social partners. For these reasons there is hardly any permanent dialogue between researchers from the different disciplines. These framework conditions impair the quality of research results, in particular those of international CoVET research.

The development of other scientific disciplines shows that a scientific society is needed as a forum for the discussion of research results if a discipline is to be constituted on a permanent international basis. The establishment of a *European Scientific Society in Comparative VET Research (ESS-CoVETR)* would provide this promising approach for CoVET research. The establishment of a *Clearing House for CoVET Research* should serve to guarantee the constitution of the *ESS-CoVETR*. During the pilot phase the *Clearing House for CoVET Research* should cooperate closely with the *ESS-CoVETR*.

In the *Clearing House for CoVET Research,* the *available resources* (personnel, servers, databases, networks, expert and information systems, societies, expertise in CoVET research etc.) should be utilised through reorganising and refocusing on the meta-level, in accordance with the terms of reference described above. The development of an *ESS-CoVETR* should be promoted by offering *services for potential users* (passive participation) in conjunction with an *invitation to tender formulation of terms of reference* encouraging active participation. These activities should contribute significantly to the permanent constitution of international CoVET research within the scientific community and the specialist public (in the area of transfer).

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[166] For example, officials of the European Commission, Directorate-General for Research, attended the Bonn Conference and the CESE Congress of 1998 in Groningen.

The task of such a *clearing house/CoVETR network* would therefore be to create transparency, ensure a forum for a permanent dialogue and transfer of knowledge and to enhance the quality of vocational training research in general, but especially CoVET research. Finally, one important task would be to contribute to 'professionalising' VET research by the establishment of the *ESS-CoVETR* and to constituting it throughout Europe as an independent discipline in conjunction with and in addition to others, by

(1) promotion of closer and enhanced cooperation between relevant researchers and research institutions, and with scientific societies and researchers who deal with one aspect of CoVET research from a scientific perspective (e.g. education sociology, cultural research, education economics, education law), to help improve the quality and efficiency of comparative studies and their relevance for policy-making, science and practice;

The terms of reference, objectives and working methods of the many and varied scientific societies, networks and cooperations must be made transparent and documented. The *Clearing House for CoVET Research* should contribute through documentation, interactive services and *linking* to the constitution of international and interdisciplinarian CoVET research and to the increased utilisation of its resources. At the same time, the aim is to make available the entire scientific process including research content, methods and results.

(2) promotion of comparative research related to comparison of countries, regions or locations, its transfer to policy-makers and promotion of social dialogue;

(3) the EU's and other supranational institutions' demand for research should be made apparent and transparent on both the supranational and national levels;

The results of CoVET research should also be evaluated with regard to its contribution to VET policies in Europe, such as to the complex of lifelong learning and continuing vocational training and its development, the qualification of vocational-training personnel, curriculum development in view of the challenges of the information society, etc. These activities should be coordinated with CEDEFOP for its *Report on Current VET Research in Europe*.

(4) the terms of reference defined in (4) are part of the state-of-the-art analyses to be developed annually;

(5) improvement of the promotion of innovation transfer through CoVET research;

Long-term, broad-based and productive transfer of innovation between researchers, policy-makers and the social partners and other players in vocational education and training must be implemented.

(6) development of the *Clearing House for CoVET Research* as a *Forum for Comparative VET researchers*, their institutes and relevant institutions in Europe which have a sustained interest in comparative research, in order to implement the objectives named above and other objectives still to be precisely defined.

In view of these needs, a *forum* should be established to provide a permanent platform on *European CoVET research*. It should be open primarily to researchers themselves, but also to interested policy-makers and practitioners as participating observers. Pertinent services are to be available to motivate researchers and research institutions to communicate and research actively with one another, and transfer the benefits of these activities to society.

During the pilot phase of a forum for VET researchers it will certainly not be possible to ask all those involved in CoVET research in the broadest sense to participate. Active participation of the research partners is important for the continuing development of CoVET research. In the initial phase, therefore, there should be geographical, political and also theme-related restrictions. The themes of the initial phase should bear some relation to the current issues of the EU research programmes and to aspects of general interest and global orientation.

In the first instance, the following issues could be raised:

- transfer: education system – vocational education and training – labour market;
- mobility (vertical and horizontal);
- double qualifications, especially in conjunction with 1) and 2);
- qualification of vocational education and training personnel;
- financing of vocational education and training;
- interrelationships between technological change and the development of vocational education and training;
- fundamental methodological issues.

These tasks cannot be mastered using conventional means of communication alone (travel, telephone, conferences, etc.). The change in paradigm of the communications culture and the consistent utilisation of IT will be crucial to the successful further development of CoVET research and the efficiency and effectiveness of a *Clearing House for CoVET Research*. The *Clearing House for CoVET Research* should incorporate and adapt the experience of institutions operating in the transfer field between the scientific community and the specialist public, using information and communications technology, such as that of CEDEFOP and EUDISED or national institutions such as ERIC, *INFFO centre* or FIS Bildung or the information and documentation centre of the German Institute for International Educational Research.

Mission of the Clearing House for CoVET Research in the pilot phase

The principle structural characteristics and the most urgent focuses of work should be translated into action. Priority should initially be given to the following tasks:

(1) international linking of relevant national and regional networks, and utilisation and involvement of scientific societies and institutions which could contribute to the yield of CoVET research

(2) overview of the relevant "research landscape" of current projects and their results through literature and documentation (abstracts for information and documents for retrieval);

(3) documentation of the relevant invitations to tender for scientific research;

(4) forum for scientific contacts and cooperation, scientific debate and social dialogue;

(5) documentation of methods, especially to support comparative work through provision of relevant works on the linguistic and terminological or documentary and classificatory dimensions;

(6) linking the relevant statistics and documentation of the elaboration of existing indicator systems, e.g. OECD, EUROSTAT;

(7) provision of literature, abstracts, documents and expert reports for scientists and the specialist public.

It would be sensible to limit the tasks to geographical Europe and areas of research directly linked to CoVET research in the first instance. It is suggested that "global inclusion" and relevant tasks should not be attempted initially. This restriction should, however, be planned flexibly enough that global research can be observed and summarised (state of the art).

Coaching of the Clearing House for CoVET Research with traditional and electronic information and communications technologies

The Clearing *House for CoVET Research* should utilise resources available from institutions which currently provide services and undertake research in the field of international CoVET research. It should be in the interest of these institutions to participate without complicated negotiations. These resources can be exploited using traditional and/or information and communications technology. The following criteria should be emphasised:

(1) Existing information and communications technology such as servers, databases, information and documentation systems, and experience with conventional meth-

ods should be exploited for networking with competent institutions. These institutions should have professional access to the global research network.

(2) Coaching (coordination and evaluation) of the link up should be through the server of a competent institution in cooperation with CEDEFOP and will be provided through a "home" in CEDEFOP's European Electronic Training Village.

(3) Development of active participation of comparative VET researchers and transfer to the interested specialist public have priority and will be promoted through coaching. The Clearing House for CoVET Research provides a forum working with conventional and information and communications technology.

(4) In the Clearing House for CoVET Research a call for proposals will be advertised annually and the outcome disseminated by means of information and communications technology (invitation to tender, database, linking, electronic conference). This phase will form the preparation for an annual workshop and the final congress of the pilot phase of the CoVETR Network.

(5) As strands of the functions described above, the following tasks are particularly suited to testing information and communications technology in comparison with traditional methods in the pilot phase:

- documentation of persons and institutions active in the field of comparative vocational education and training research (database, internet link);
- documentation of research activities (database);
- consultation in methodological questions (establishment of a link to competent sources/experts);
- documentation of EU research requirements, e.g. invitations to tender, programmes;
- support for the development of websites by the clearing house;
- documentation of events (database);

- online publication (as periodicals) of important topical CoVET research contributions;
- electronic conferences/workshops on themes advertised by the Clearing House for CoVET Research within the framework of EU research policies, and for the preparation of the annual real workshops/conferences.

This change in paradigm must not, however, lead to the sacrifice of important personal contacts on the "altar of modernity". Communications researchers emphasise precisely the benefits of personal debate for the further development of the relevant fields of research. New information and communications technologies are effective in enhancing and optimising the dissemination of scientific debate, e.g. by the concomitant and well-planned presentation of research results throughout Europe, by a constantly updated overview of relevant researchers and institutions, by the promotion of cooperative partnerships between them and their institutions or by the increased potential for transfer and the facilitation of dialogue among consumers, or rather users of the results.

Potential participants in the European Scientific Association in Comparative VET Research

The following target groups could be interested:

(1) internationally active VET researchers, university chairs for Comparative Education, Education Research or VET research;

(2) scientists, university institutes, research institutes from other scientific disciplines doing comparative research in the field of VET research, such as education sociology, education law, cultural psychology, education economics;

(3) national, regional and international scientific societies of different disciplines, international (global and regional or transnational) organisations for comparative education research;

(4) networks which have developed from research projects with specific thematic terms of reference. This refers in particular to networks generated within the

framework of EU activities and programmes or those of other supranational institutions;[167]

(5) (research) institutes (national and international levels), dealing with vocational education and training in the broadest sense (e.g. Federal Institute for Vocational Training; CEREQ, German Institute for International Educational Research, ISFOL, Institute for Labour Market and Vocational Research of the Federal Labour Office).

The following should be given permanent observer status:

(1) institutions and administrations of the European Union (e.g.: DG XII, DG XXII, CEDEFOP, ETF; EURYDICE, EUROSTAT),

(2) international organisations (e.g. UNEVOC; ILO, OECD, World Bank);

(3) national and regional education and VET administrations (e.g. national and/or ministries of education and labour, labour administrations, etc., and in particular, their research, study and planning departments)

Potential participants in a Clearing House for CoVET Research

As already described, the participants in a Clearing House for CoVET Research are not determined purely by the scientific discipline CoVET research. It should prove more beneficial to seek those who might expect participation to bring advantages and help in mastering specific tasks and focuses of interest engendered by their professional or private sphere. These could be:

(1) internationally active VET researchers, university chairs for Comparative Education, Education Research or VET research;

(2) scientists, students, university institutes, research institutes from other scientific disciplines doing comparative research in the field of VET research, such as edu-

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[167] Examples are Europrof (ITB, Graham Attwell), Vetnet (department of EERA, Martin Mulder), Forum (ITB, Michael Kuhn), Intequal (WIFO, Sabine Manning), Duoqual (WIFO, Sabine Manning), VETCULT, VET and Culture, (University of Tampere, Anja Heikkinen), SPES-NET (University of Jyväskylä, Johanna Lasonen), New Skills Network (University of Amsterdam), Transfer

cation sociology, education law, cultural and social psychology, education economics;

(3) the national, regional and international scientific societies of different disciplines, international (global and regional or transnational) organisations for comparative education research;

(4) networks which have developed from research projects with specific thematic focuses; This refers in particular to networks generated within the framework of EU activities and programmes or other supranational institutions;[168]

(5) (research) institutes (national and international levels), dealing with vocational education and training in the broadest sense (e.g. Federal Institute for Vocational Training; CEREQ, German Institute for International Educational Research, ISFOL, Institute for Labour Market and Vocational Research of the Federal Labour Office);

(6) institutions and administrations of the European Union (e.g. DG XII, DG XXII, CEDEFOP, ETF; EURYDICE, EUROSTAT),

(7) international organisations (e.g. UNEVOC; ILO, OECD, World Bank);

(8) national and regional education and VET administrations (e.g. national and/or ministries of education and labour, labour administrations etc.)

(9) agencies and institutions for vocational education and training in the broadest sense (e.g. enterprises, schools, VET centres, chambers (of commerce and industry etc.), other private providers);

A) social partners (employers' associations, trade unions) on the interprofessional and sectoral levels;

B) intermediary organisations in international VET cooperation such as ILO, UNESCO and their regional institutes;

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[168] Examples are Vetnet (department of EERA, Martin Mulder), Forum (ITB, Michael Kuhn), Intequal (WIFO, Sabine Manning), VETCULT, VET and Culture, (University of Tampere, Anja Heikki-

C) consultant firms;

D) enterprises;

E) practitioners in international VET cooperation (e.g. project staff, exchange participants and participants in EU VET programmes).

This list of potential inquirers for information on vocational education and training in the broadest sense is not exhaustive. Just discovering how interested users might be and seeing to the hardware and software requirements of a *CoVETR Network* for these target groups in the geographically and politically defined sphere of action of CEDEFOP would be very expensive, although in the medium term it would be extremely useful for all concerned.

Utilisation of competences and cooperation with relevant research institutions and networks to establish the Clearing House for CoVET Research

This expert report sets out in detail why *international CoVET research*, as an interdisciplinary science, is gaining in importance, and where its deficits lie. On the basis of these analyses, some proposals for the permanent constitution of *international CoVET research* in the scientific community were developed. Existing resources, experience and competences should be incorporated when establishing a *Clearing House for CoVET Research*. This preliminary study cannot provide a 'complete' overview of persons, institutes of higher education, research institutions, international and national institutes, networks or scientific societies. At this point other available competences can be outlined which complement those mentioned earlier in the expertise. The German Institute for International Educational Research has been cited as an example. This decision is justified by the assessor's acquired competence and immediate working context and contacts. Other institutions may be similarly competent to participate in establishing a *Clearing House for CoVET Research*. It is not important to promote any particular institution. Rather, the crucial factor is to develop a catalogue of criteria from experience gained in order to describe competences which should be

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nen), SPES-NET (University of Jyväskylä, Johanna Lasonen), New Skills Network (University of Amsterdam), Transition of young people network, etc.

readily available for promoting the CoVET Research Network among institutions cooperating internationally.

These competences should relate to:

(1) several years of international cooperation in CoVET research or in the directly related discipline of Comparative Education;

(2) interdisciplinary research in the area of international CoVET research, within the research institution and through external cooperation;

(3) several years of international cooperation with sciences conducting research in the field of CoVET research, such as education economics, sociology, political sciences, psychology, legal sciences, etc.;

(4) integration into or cooperation with national, European and international scientific societies related to the relevant disciplines;

(5) cooperation with other research institutions, university institutes, scientists working in the national, European and international context;

(6) cooperation with national, European or international institutions in the transfer area (e.g. OECD, World Bank, UNESCO, ILO, CEDEFOP, ETF, Eurostat, EURYDICE);

(7) reviewed publications on *international CoVET research* reporting results of comparative research projects and on methodological competence;

(8) consulting services for the specialist public and the social partners with regard to existing competences in international CoVET research;

(9) cooperation, presentation or coaching for networks related to *international CoVET research*;

(10) transfer of research results to the scientific community and the specialist public by means of specific services (consultation, information and documentation);

(11) competences in the area of information and communications technology through direct references (e.g. servers, databases, linking, networks, electronic conferences, internet competence).

It is equally important for the constitution of a *Clearing House for CoVET Research* to use existing cooperative network partnerships in the area of international CoVET research, especially in Europe.[169] If we succeed in gaining support for the *CoVET Research Network* from the 'pertinent' research institutions, the different national institutes of the Member States and the associated members of the EU, and people working in networks related to the scientific institutions they represent, we can expect the international reaction to be such that the interdisciplinary nature of the network will be guaranteed by cooperation from the most diverse scientific societies.

Establishment of a European Scientific Association for Comparative VET Research

The *European Scientific Association for Comparative VET Research* should be established and run primarily as an independent society of researchers. For the permanent constitution and the quality of the *ESA-CoVETRES* it is important that this scientific society operates outside the organs of the EU. Experience with relevant international scientific societies which finance themselves confirm the benefits of the proposed structure.

Since there is almost certainly no chance of establishing the *ESA-CoVETRES* as a completely new institution, it should be founded on existing structures. Because of its relatively stable structures the *European Education Research Association* (EERA) could certainly provide a good framework. New scientific societies must be installed in addition to the networks already in existence in order to emphasise the scientific standard aspired to. Although they utilise the framework of *EERA* and their annual conferences, they are independent and only convened when prominent researchers or research institutions from more than half the Member States of the EU and the other states of Europe want to join. Independent researchers representing important research institutions should elaborate proposals for the constitution of a *European Scientific Association for Comparative VET Research, ESA-CoVETRES.*

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[169] E.g. through the TTNet Network, in which joint comparative research projects extending beyond the *training of staff for vocational education and training* were able to develop.

List of abbreviations used

CEDEFOP	Centre européen pour le développement de la formation professionnelle, European Centre for the Development of Vocational Training
Ciretoq	Circle for Research Co-operation on trends in Occupations and Qualifications
CoVET Research	Comparative Vocational Education and Training Research
DIPF	Deutsches Institut für Internationale Pädagogische Forschung German Institute for International Educational Research
EERA	European Education Research Association
ERASMUS	European Action Scheme for the Mobility of University Students
ESA-COVETRES	European Scientific Association for Comparative Vocational Education and Training Research
ETF	European Training Foundation, Turin
EU	European Union
EEA	European Economic Area
IEA	International Association for the Evaluation of Educational Achievement
ILO	International Labour Organisation
LEONARDO	= LEONARDO da Vinci Action Programme for the introduction of an EU VET policy
NAFTA	North American Free Trade Agreement
OECD	Organisation for Economic Co-operation and Development
PETRA	Partnership in Education and Training, Action Programme of the European Communities to promote the vocational training of young people in the Member States and to prepare young people for adulthood and working life
Socrates	EU Framework Programme for the areas of school and higher education
UNESCO	United Nations Educational, Scientific and Cultural Organization
VET	Vocational Education and Training

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APPENDIX I

Current Research Projects on Education and Training within the Framework of the Socio-economic Keynote Theme of the Fourth Framework Research Programme of the EU

We present here some examples of research projects on the socio-economic theme of the Fourth Framework Research Programme of the EU (cf. also the contribution by Erhard Schulte in this volume)

1 Developing Learning Organisation models in SME[170] clusters - DELOS)

Financed by:	European Union, European Commission, GDXII/TSER (Targeted Socio-economic Research)
Duration:	two years (1996 to 1998)
Project leader:	Istituto Guglielmo Tagliacarne (I)
Partners:	The Tavistock Institute (UK) ECWS (NL) CCI Paris (F) InteReg (AT) Formit (I) Infyde (E)

The DELOS project has initiated research work in five European Member States.

The DELOS project regards the concept of clusters as a valid category model for classifying SMEs and the concept of organisational learning as a significant element of operational dynamics for the evaluation and explication of SME *behaviour*.

This is based on the following key hypotheses:

- collectively, SMEs are the motor for economic growth, their activities in general directly benefit the national economy;
- SMEs reflect structured patterns of interaction;
- facilitation of SME clusters will render the dissemination of knowledge and innovation more efficient;
- facilitating focused learning in SMEs stimulates *specific* actions and decisions through which SME clusters can consolidate their market position or expand into other markets;
- large organisations can act as role models for SME clusters, helping them to understand and develop joint actions;
- cluster models are transferable to other socio-cultural and socio-economic circumstances (even across geographical and sectoral frontiers).

Based on these premises, DELOS has the following aims:

a) to examine the modalities through which SME clusters function as learning organisations and investigate the organisational learning process resulting from the concentration;

b) to provide indications appropriate for promoting educational and employment policies to the advantage of SMEs.

The most important outcomes of the project – which are to be analysed on two levels, *methodologically* and *empirically* – are the following:

- development of a methodology and determination of the relevant aids for analysing SME clusters and the learning processes which ensue within a cluster;

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[170] small and medium-sized enterprises

- determination and description of the structure of five clusters – as a model of interpretation of SME cluster interaction patterns;
- acceptance of the key role of the *learning organisation* and of *organisational learning* as a suitable unit for the analysis of cluster-forming SMEs;
- detailed analysis of existing relationships and links between learning processes and structural or institutional characteristics on the cluster level using the case-study approach;
- strategic function – both from the bottom up and the top down – of the further development of competences and skills within SMEs;
- necessity of elaborating policies and tailor-made actions in support of the role of local institutions and authorities, as well as local employers' organisations as *learners* and transfer links between SMEs and local or central government;
- eminent role of the education system – in particular of specialised institutes – as places where knowledge and competences are constantly being updated;
- elaboration of policy-oriented guidelines and practical aids for the promotion of organisational learning in SMEs and SME clusters.

2 The role of HRD within organisations in creating opportunities for lifelong learning: concepts and practices in seven European countries

Hilde ter Horst

Introduction

The year of 1996 has been the European year of lifelong learning. Though the year is over, lifelong learning will remain an important topic for a long time to come, as Europe is developing towards a 'learning society' (see Gass, 1996). Organisations are becoming important partners in this learning society, as they are offering ever more opportunities for continuous learning to their employees (Pawlowsky & Baumer, 1996).

Current business reality of many European organisations places ever more demands on their ability to respond quickly and adequately to changes in their environments, by improving existing products and services or by innovation (a.o. Carnevale, 1992; Nonaka, 1991).

As a result of the ever increasing rate of (technological) change - induced by developments such as globalisation and the current 'explosion of knowledge' - organisational capacity for learning is being pinpointed as the key ability for organisations in the nineties. New managerial concepts such as the learning organisation (Senge, 1990) and knowledge management (Drucker, 1995; Leonard-Barton, 1995; Pawlowsky & Baumer, 1996) reflect the search for ways to improve organisational capacity for learning.

Organisations need for their employees to learn, in the sense of acquiring new knowledge and skills and using these to improve existing work practices, products or services, or to jumpstart innovation. Learning, therefore, *becomes part of everyday work*. And as this is the case, and employee learning takes on a strategic meaning for organisations, organisations seek ways to facilitate employee learning (see e.g. McGill & Slocum, 1994; Winslow & Bramer, 1994). This can be readily recognised in the aforementioned management concepts such as the learning organisation, which all focus on the question of how to facilitate on-going employee learning at all levels (and how to make sure the organisation benefits from this learning).

HRD's role in organisational learning and employee learning

As organisations develop themselves into learning oriented organisations, this has a profound impact on the relationship between work and learning. Whereas learning used to be primarily equalled to training, it now becomes predominantly associated with learning from experience, and self-directed learning. Similarly, learning is no longer regarded as a classroom activity, but primarily as something that takes place on-the-job as a continuous, on-going activity. On the one hand this changing view of learning has far-reaching consequences for line management, which is expected to manage the workplace as a place fit for learning (for instance by fostering a learning climate, and by coaching employees). On the other hand it considerably affects the role and tasks of Human Resource Development (HRD) professionals, who are involved in organising training activities for the organisation. The role which is generally contributed to HRD practitioners is the role of *consultant* towards line management on how to facilitate and stimulate employee learning in the workplace, and how to link this learning to organisational needs and goals. Their work field broadens considerably, and the word 'trainer' (as they are sometimes called) is therefore really no longer an adequate label for their function. The new role of HRD practitioners will be the role of a strategic learning facilitator, performance consultant or even change agent (Laiken, 1993; Marsick & Watkins, 1993; Onstenk, 1994; Pearn, Roderick & Mulrooney, 1995; Robinson & Robinson, 1995; Stahl, Nyhan & d'Ajola, 1993).

Objectives of the study

As a result of a growing number of publications on HRD's role in organisational learning by fostering the 'working-lifelong learning' of employees, the new role of HRD becomes clearer. However, many uncertainties remain for HRD professionals, especially with regard to the question of how to bring their new role as a consultant into practice. There is little 'recipe' literature, and there are only very few instruments to help HRD officers in this regard. Meanwhile, many interesting initiatives are being undertaken by HRD practitioners all over Europe in order to facilitate employee learning on a continuous basis, on and off-the-job, and thus assist in the strategic learning of the organisation as a whole. This study aims to examine these initiatives, with two main objectives:

The first objective is to look more closely into the *specific interpretation European companies give to the new role of HRD in fostering employee learning*, as compared to US and Japanese businesses. Though several influential publications from a European origin have appeared in this field, literature on concepts such as the learning organisation and fostering workplace learning has traditionally been dominated by the perspectives of US and Japanese researchers and practitioners. Because the situation in Europe differs in several ways from the situation in these countries, it is useful to gain more insight into the European perspective.

The second objective, at least equally important as the first one, is *to contribute to the further professionalization of HRD in Europe*. It is very important that HRD meets the new questions and challenges which it is facing as a result of the organisational need for continuous learning and change. A powerful and proactive HRD function which is able assist its organisation in the realisation of meaningful, strategic learning processes of employees will help the organisation to secure its competitiveness. To assist in the professionalization, both concepts and practices of HRD departments will be considered in this study. The term *concept* refers to the way in which HRD departments view their own role in the creation of opportunities for employee learning. The *practices* are the way in which HRD professionals try to bring their ideas into being, including the problems they face and the way in which they solve these. By deliberately taking into account the practical considerations, the result of the study will be twofold: next to a broadened knowledge base it will lead to a widened range of useful working strategies and instruments. Thus, the result can serve both as a basis for further research on the changing role of HRD in work organisations and for a practical guideline for HRD practitioners throughout Europe on how to facilitate employee learning and thus assist their organisations in securing their competitiveness in a continuously changing environment.

Research questions

The following research questions have been formulated:

1. How do HRD departments in learning oriented organisations throughout Europe envision their own role in stimulating and supporting employees to learn continuously, as a part of everyday work (with the intent to contribute to organisational learning, and thus to enhance organisational competitiveness)?

2. What differences in outlook can be found between HRD departments in European organisations and the perspectives on the role of HRD which exists in the US and Japan?

3. What strategies do European HRD departments adopt to realise their envisioned role?

4a. What inhibiting factors do European HRD departments encounter when trying to realise their new role? How do they cope with these factors?

4b. Which factors are conducive to the realisation of HRD's new role?

4c. How do these inhibiting and conducive factors influence the vision of the HRD department with regard to its own role?

Research methods

To study the research questions a combination of qualitative and quantitative research methods is proposed. The research now available on the subject of HRD in learning oriented organisations consists mainly of case studies. Though this is logical, given the pioneering and exploring phase of the theory, it is deliberately decided to add a quantitative aspect to the study, to gain some insight in the degree to which these concepts and practices occur in HRD departments in organisations throughout Europe.

Therefore it is proposed to use the following methods:

qualitative case studies: to gain an in-depth understanding of the concepts of the HRD-departments, the strategies they adopt to bring these into practice and the facilitating factors as well as the difficulties they encounter during this implementation process;

a *survey* of a larger group of organisations: to ascertain to what degree the findings are representative for more organisations, throughout the seven EU-countries that participate in the study.

Moreover, to be able to compare the results of the European study with Japanese and US views on learning in work organisations, a *literature review* is conducted of Japanese and US publications.

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3 TSER Research Project (Project No. PL97/2100): Comparative Analysis of Transitions from Education to Work in Europe

This is a 3 year comparative research project on education/training to work transitions in 5 European countries, based on flow analyses of school to work transition surveys and stock analyses of Labour Force Surveys.

The comparative research has 4 main objectives:

- To develop an adequate and comprehensive conceptual/theoretical framework of the diverse nature of European education training systems and their varying relationships to labour market integration processes; and to propose organising hypotheses to explain variations in educational/training outcomes and their relationships to labour market integration outcomes.
- To construct a comparative 4-7 country data base of school leavers' surveys in France, Ireland, the Netherlands and Scotland - with possible later inclusion of Sweden, Belgium (Flanders) and Portugal. Secondly construct a comparative 6 year follow-up (longitudinal) data base of school to worth transition surveys in France, Ireland and (possibly) Sweden. In addition the full national Labour Force Surveys for all participating countries will be used, together with the co-operation of EUROSTAT, to carry out detailed cross-sectional analyses of education and labour market relationships for all EU countries.
- To carry out detailed and integrated comparative analyses of these three data sets to test our main hypotheses, refine and develop a more adequate conceptual/theoretical framework and to analyse and explain the similarities and differences in the factors affecting educational/training achievements and successful transitions from education/training to labour market integration in the countries concerned.
- To analyse in detail the impact of national institutional differences in education/training arrangements and in ET and labour market linkages on the nature and success of transitions: issues such as exclusion, extent of level and content congruence *(job matching)*, *qualification inflation*, *over-qualification* etc. The main hypothesis is that substantial interaction effects exist between such national institutional arrangements and the relationships between social origins

and education/training outcomes, as well as the relationships between the latter and school-to-work transition processes and outcomes.

The study uses rich sources of data and analytical procedures: flow analyses of school to work transitions using existing school leavers' surveys (1 year) in 4/5 countries and follow-up (cohort) studies of school to work transitions in 2/3 countries; and both current and time series (stock) analyses of Labour Force Surveys. The follow-up surveys allow us to study both the short and medium term labour market outcomes for different types of school/College leavers; ,while the stock analyses of the Labour Force Surveys allow us to check the generalisability of our findings, place these transitions in a wider European context, as well as study changes over time in the education/training to labour market relationships.

The study was initiated in December 1997 and will be completed by December 2,000. The main research team members are:

- Economic and Social Research Institute, Dublin: Main Co-ordinator: Professor Damian F. Hannan.
- Centre for Educational Sociology, University of Edinburgh. Professor David Raffe
- Mannheimer Zentrum fur Europaische Sozialforchung, Universitat Mannheim: Professor Walter Muller
- Centre dEtude et de Recherches sur les Qualifications (CEREQ), Marseille: Michele Mansuy, and Patrick Werquin
- DESAN Marktonderzoek B.V., Amsterdam. Hans Rutjes; and Limburg Institute for Business and Economic Research (ROA), Maastricht: Ed. Willems.

In addition colleagues from Portugal (INOFOR, Lisbon), Belgium/Flanders (HIVA, Univ. of Louvain), and Sweden (IFS, Univ. of Stockholm) have now joined the research team.

The main timetables for products/deliverables are: Conceptual/Theoretical Framework - June, 1998. Research workshop/Conference on first research results - March/April, 1999. Final report: December 2000.

4 Work experience as an education and training strategy: new approaches for the 21st century

Fernando Marhuenda[1]

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Focus of research.

- Ages 16-19.
- Changes in work organisation.
- Technological innovation, with special attention to information technology.
- European dimension of work experience.

– Pedagogical arrangements: curricular and organisational aspects of work experience.

Objectives of the project.

1. To undertake a European policy study and review of work experience.
2. To develop a common framework and terminology for understanding work experience.
3. To undertake case studies of innovative work experience partnerships.
4. To compare outcomes and develop transferable models.
5. To develop European quality criteria and a quality framework for work experience.
6. To undertake an active dissemination programme.

Methodologies to carry on research.

1. Bibliographical review:

- Academic literature.
- Country literature.
- Curriculum materials.

2. Policy review:

Contextualization of the country:

- productive system
- labour market
- education and training system
- Review of legislation regarding work experience.
- Interviews with:
- policy makers
- trade unions
- employers

- teachers
- trainers

3. Case studies:

examples of alternatives, innovation and new ways of organising and delivering work experience.

Summary of the project.

The project aims to analyse and develop work experience as a European education and training strategy appropriate to the changing economic and social conditions of the 21st. century. Its context is the future and changing nature of work.

Overarching questions concern the extent to which work experience can enable young people to understand and prepare for working life and the ways in which educational institutions and companies can work together creatively to deliver relevant learning outcomes.

Existing data, models and approaches are being reviewed, best practice identified and innovative models will be tested for transparency and transferability at a European level. The new models will derive from institutional projects to be analysed by the research team in the six partner states. The work of the project will include the development of common terminology and agreed quality criteria and approaches to evaluation. The project will have practical, theoretical and policy outcomes and benefits.

Researchers from the six partner states are working collaboratively in a review of work experience as a vehicle for learning and on a study of current and future policy towards work experience in the 16-19 years age group. Other European countries are joining these exercises so as to build up a clear profile at European level.

The research is focusing on the 16-19 age group and is examining the aims, processes and outcomes of work experience in the light of changes in the labour market and trends in workplace requirements and organisation. The aim is to analyse and test innovative approaches (including use of information and communications technology) to both domestic and European work experience. The methodology involves researchers, enterprises and leading edge educational institutions working together. The products will include transferable models of good and innovative practice.

A particular concern will be with core and transferable skills and attitudes towards lifelong learning. There will therefore be a focus on the development of quality criteria and evaluation procedures for work experience which can be applied at a European level.

Appendix II

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